ORDER NO. AVS9801086C8

# Service Manual

**Video Multiplexer**

# WJ-FS616

## SPECIFICATIONS

| | |
|---|---|
| **Power Source :** | 220 - 240 V AC 50 Hz |
| **Power Consumption :** | 50 W |
| **Camera Input (1-16) :** | 1.0 V[p-p] /75 Ω composite video signal<br>0.5 V[p-p] /75 Ω data signal and 2.5 V[p-p] /75 Ω vertical timing pulse multiplexed. |
| **Camera Output (1-16) :** | 1.0 V[p-p] /75 Ω composite video signal |
| **Spot Output:** | 1.0 V[p-p] /75 Ω composite video signal |
| **Multiscreen Output :** | 1.0 V[p-p] /75 Ω composite video signal<br>Y Signal; 0.7 V[p-p], C Signal; 0.3 V[p-p] /75Ω S-video signal |
| **Recording Output :** | 1.0 V[p-p] /75 Ω composite video signal<br>Y Signal; 0.7 V[p-p], C Signal; 0.3 V[p-p] /75Ω S-video signal |
| **Playback Input :** | 1.0 V[p-p] /75 Ω composite video signal<br>Y Signal; 0.7 V[p-p], C Signal; 0.3 V[p-p] /75Ω S-video signal |
| **Alarm/Remote Control :** | 37-pin D-sub Connector |
| **VTR Control (RS-232C) :** | 25-pin D-sub Connector |
| **Ambient Operating Temperature :** | –10 °C - +50 °C (14 °F - 122 °F) |
| **Ambient Operating Humidity :** | Less than 90 % |
| **Dimensions :** | 420 (W) X 88 (H) X 350 (D) mm [16-9/16” (W) X 3-7/16” (H) X 13-3/4” (D)] |
| **Weight :** | 6.5 kg (14.3 lbs.) |

Dimensions and weight are approximate.
Specifications are subject to change without notice.

Panasonic

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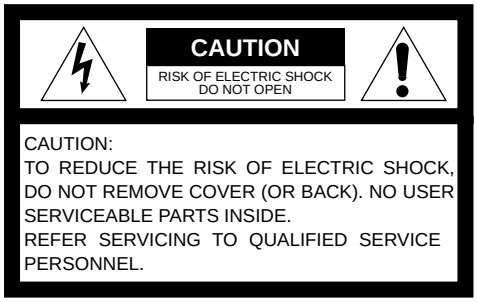
## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.

### IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "⚠" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be repleced with manufacturer's specified parts to prevent shock, fire, or other hazards.
Do not modify the original design without permission of manufacture.

# STANDARD ACCESSORIES

Rack Mounting Bracket ..... 2 pcs.
Screws (M4 x 10) ..... 4 pcs.
Switch Protector ..... 1 pc.

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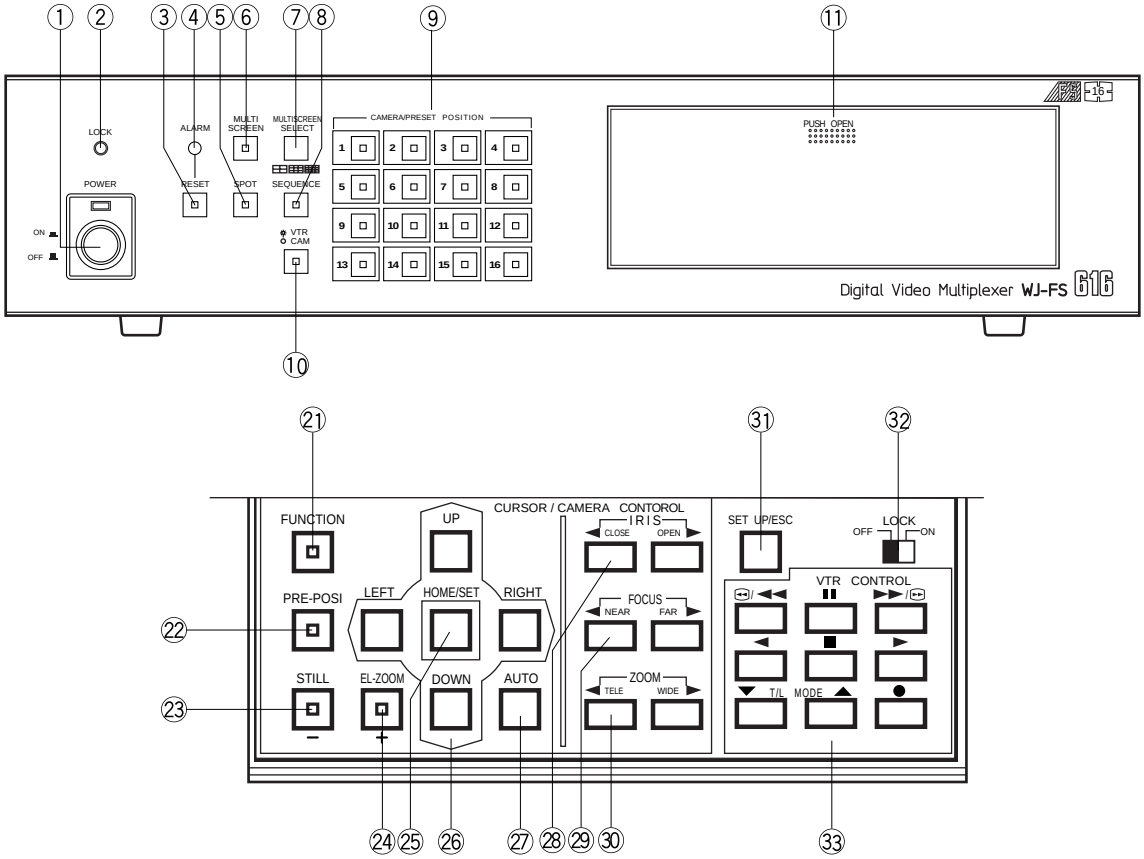
# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

### <Front View>




**1. Power Switch (POWER ON / OFF)**

This switch turns the power of the video multiplexer on or off. The LED (Red) lights up when the power is turned on.

**Caution:** The LED indicator blinks to indicate an abnormality of the cooling fan in this appliance.
Turn the power off and refer servicing to qualified service personnel.

**Note:** To prevent that the power of the video multiplexer is turned off accidentally, install the supplied switch protector.

**2. Lock Indicator (LOCK)**

This LED (Yellow) indicator lights up to indicate that the LOCK switch is in ON position.
While this LED is lit, control from the video multiplexer is disabled.

**3. Alarm Reset Button (ALARM RESET)**

This button is used to cancel an active alarm. Press this button, while the alarm function is activated, to reset the alarm and return the system to the condition before the alarm function was activated.
The LED (Orange) in the button lights up to indicate that the alarm suspension mode is selected.

**4. Alarm Indicator (ALARM)**

This LED (Red) indicator blinks to indicate an alarm condition exists.
It changes to steady light when the alarm is reset automatically.
To turn the indicator off, press the ALARM RESET button.

**5. Spot Monitor Button (SPOT)**

This button is used to operate the spot monitor connected to the SPOT OUT connector.
The LED (Green) in the button lights up to indicate that the spot monitor is selected.

**6. Multiscreen Monitor Button (MULTISCREEN)**

This button is used to operate the multiscreen monitor connected to the MULTISCREEN connector.
The LED (Green) in the button lights up to indicate that the multiscreen monitor is selected.

**Note:** When REC OUT is used as Multiscreen 2 Output, this button alternately selects multiscreen output or multiscreen 2 output.
The LED blinks to indicate that the multiscreen 2 output is selected.

**7. Multiscreen Selection Button (MULTISCREEN SELECT)**

This button is used to select the multiscreen pattern to be displayed on the multiscreen monitor while monitoring the camera picture or VTR playback picture.

Pressing this button repeatedly will switch the screen as follows:

**Camera Picture:**

4→7→9→10→13→16→4 screen segments

**VTR Playback Picture:**

4→9→16→4 screen segments

**8. Sequence Button (SEQUENCE)**

This button is used to activate the sequence mode. In this mode, a series of camera pictures is displayed in succession on the monitor screen for the specified duration.

The LED (Green) in the button lights up to indicate that this mode is selected.

**9. Camera Number Buttons (CAMERA)**
**Preset Position Number Buttons (PRESET POSITION)**

**CAMERA:**

These buttons are used to select the desired camera picture.

The LED (Green) in the button lights up to indicate the camera number presently selected.

**PRESET POSITION:**

These buttons are used in combination with the PRE POSI button to assign a preset position number to the selected camera.

**10. VTR / Camera Selection Button (VTR / CAM)**

This button is used to select the camera picture or VTR playback picture to be displayed on the multiscreen monitor screen.

The LED (Green) in the button lights up to indicate that the VTR mode is selected.

**Note:** The above operation is not valid unless multiscreen output is selected by pressing the Multiscreen Monitor button.

**11. Control Panel**

Press “PUSH OPEN” to open the control panel.

**21. Function Button (FUNCTION)**

This button is used to display the VTR playback picture with the camera pictures on the multiscreen monitor.

During the setup, this button is used to select the next page.

**22. Preset Position Button (PRE-POSI)**

This button is used to assign a preset position to a specified camera.

**23. Still Button (STILL)**
**Increment Button (+)**

This button is used to still the picture displayed on the multiscreen monitor.

The LED (Green) in the button lights up to indicate that the still mode is selected.

During the setup, this button is used to select the desired parameter in the setup menu.

**24. Electronic Zoom Button (EL-ZOOM)**
**Decrement Button (–)**

This button is used to zoom the picture presently displayed on the multiscreen monitor.

The LED (Green) in the button lights up to indicate that the zoom mode is selected.

During the setup, this button is used to select the desired parameter in the setup menu.

**25. Home / Set Button (HOME / SET)**

This button is used to return to the home position of the camera.

During the setup, this button is used to display a submenu in the setup menu if the item has its own setting menu.

**26. Direction Arrow Buttons**

These buttons are used to operate the Pan/Tilt Head manually, or to move the cursor to the desired position in the setup menu of the Video Multiplexer.

**UP:** Upward
**DOWN:** Downward
**LEFT:** Left
**RIGHT:** Right

**27. Auto Button (AUTO)**

This button is used to activate the auto panning function when the specified camera is connected.

**28. Iris Control Buttons (IRIS, CLOSE / OPEN)**

These buttons are used to close or open the lens iris of the specified lens mounted on the camera.

When these buttons are pressed at the same time, the lens iris is reset to the factory settings.

**29. Focus Control Buttons (FOCUS, NEAR / FAR)**

These buttons are used to adjust the lens focus of the specified lens mounted on the camera.

When these buttons are pressed at the same time, the lens focus is automatically set.

**30. Zoom Control Buttons (ZOOM, TELE / WIDE)**

These buttons are used to adjust the lens zoom of the specified lens mounted on the camera.

**31. Setup/Escape Button (SETUP / ESC)**

This button is used to display the setup menu of the Video Multiplexer.

During the setup, press this button to execute the currently selected setting and return to the previous setup menu.

**32. Lock Switch (LOCK OFF / ON)**

This switch can be used to lock out operation of the video multiplexer panel controls.

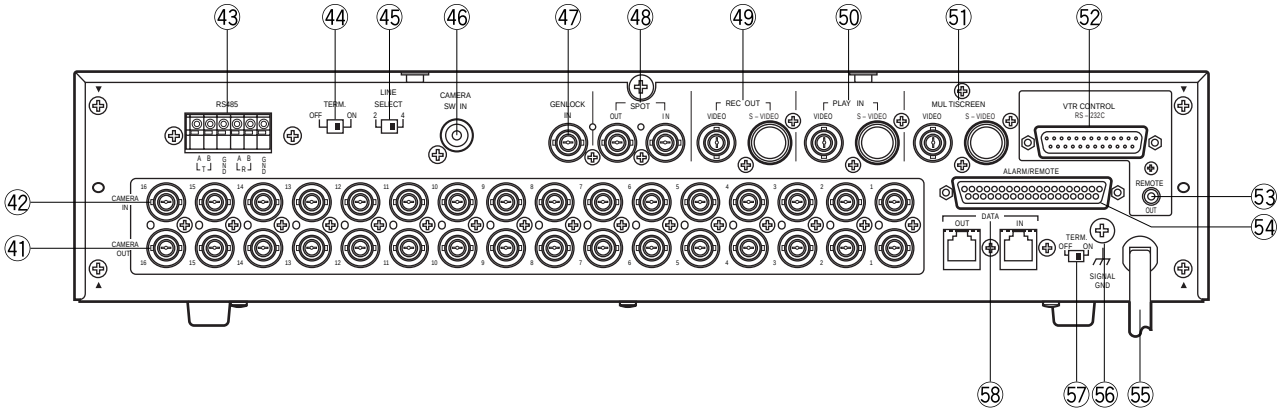
While this switch is in ON position, control from the video multiplexer is disabled.

### 33. VTR Control Buttons

These buttons are used for remote control of the VTR that is connected to the Video Multiplexer.
The buttons function as shown below.

- ◄◄ : Rewind
- ►► : Fast Forward
- ■ : Stop
- ▼ : Decreases recording duration
- ● : Record
- ▮▮ : Pause
- ◄ : Reverse Play
- ► : Play
- ▲ : Increases recording duration

## <Rear View>




### 41. Camera Output Connectors (CAMERA OUT)

The video signal connected to the Camera Input Connector (CAMERA IN) is looped through to these connectors with an automatic 75Ω termination.
The camera control signal multiplexed on the video signal is not available at this connector. When the Power Switch of the Video Multiplexer is turned off, no signal is present at this connector.

### 42. Camera Input Connectors (CAMERA IN)

These connectors accepts either a colour or B/W composite video signal from the camera. In addition, the VD2 signal for synchronizing the vertical timing of the cameras, and data to control camera site devices are multiplexed through this connector.

### 43. RS485 Terminal (RS485)

This terminal is used to exchange control data with the camera site.

### 44. Termination Switch (TERM., OFF / ON)

This switch is used to enable termination of the RS485 terminal.

### 45. Line Selection Switch (LINE SELECT, 2/4)

This switch lets you select either Full Duplex (4 lines) or Half Duplex (2 lines) for the communication lines.

### 46. Camera Switching Input Connector (CAMERA SW IN)

The camera switching pulse from the time lapse VTR is supplied to this connector.
The camera switching interval (Sequential Dwell Time) can be synchronized with the time lapse mode set in the associated time lapse VTR.

### 47. Gen-Lock Input Connector (GENLOCK IN)

The Gen-Lock signal can be supplied to this connector for synchronizing the system.

### 48. Spot Connector (SPOT OUT / IN)

**IN:** This connector accepts the video output signal from the external system.
The supplied video can be displayed on the spot monitor screen with the specified conditions.

**OUT:** This connector supplies the video output signal for the spot monitor.

### 49. Record Output Connector (REC OUT, VIDEO / S-VIDEO)

The recording signal for the time lapse VTR is provided via this connector.
This connector can also be used as multiscreen output 2 with the specified conditions.

### 50. Playback Input Connector (PLAY IN, VIDEO / S-VIDEO)

The playback signal from the time lapse VTR is supplied to this connector.

### 51. Multiscreen Output Connector (MULTISCREEN)

The video output signal for the multiscreen monitor is provided via this connector.

### 52. RS-232C Port (VTR CONTROL, RS-232C)

The VTR control signal for the time lapse VTR is provided via this connector.
Connecting a PC to this connector will allow you to remote control the video multiplexer.

**53. Remote Output Connector (VTR CONTROL, REMOTE OUT)**

The VTR control signal for the time lapse VTR is provided via this connector.

You can select on the setup menu whether to have the VTR control signal supplied from this connector or the RS-232C Port.

**54. Alarm / Remote Control Connector (ALARM / REMOTE)**

This connector accepts the alarm signals from the associated alarm sensor units and the control signals from the external system.

**55. Power Cord**

**56. Signal Ground Terminal (SIGNAL GND)**

**57. Termination Switch (TERM., OFF / ON)**

This switch is used to enable termination of the video multiplexer's data port.

**58. Data Ports (DATA, OUT / IN)**

These ports are used to exchange control data with the WV-CU550A System Controller or a PC in a system.

# INSTALLATIONS

**The installations described below should be made by qualified service personnel or system installers.**

## ■ Installing the WV-PB6164E Data Multiplex Boards

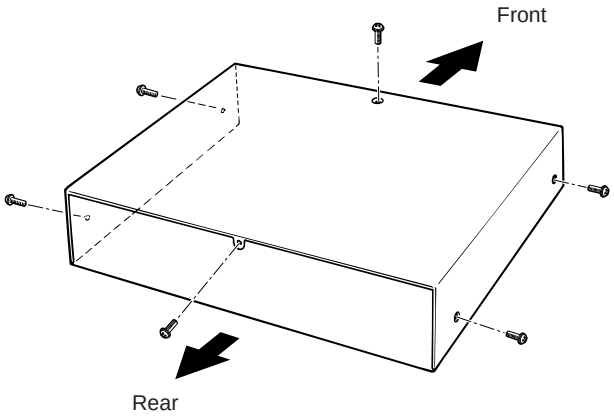
When controlling the camera with the multiplexed control data by connecting a coaxial cable, the WV-PB6164E Data Multiplex Board must be installed in the Video Multiplexer.

Four data multiplex boards are included with the WJ-FS616 for cameras 1 to 4.

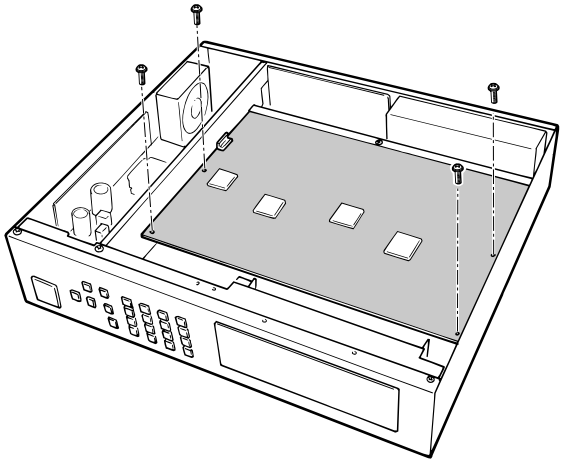
Please note that additional multiplex boards are available for purchase as model WV-PB6164E Data Multiplex Boards, which includes four control boards.

**Caution:** Before installing boards, be sure to turn off the Power Switch of the video multiplexer.

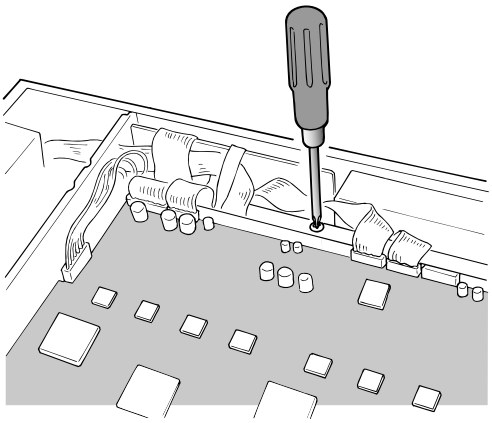
1. Remove the six screws on the top cover of the video multiplexer as shown below.



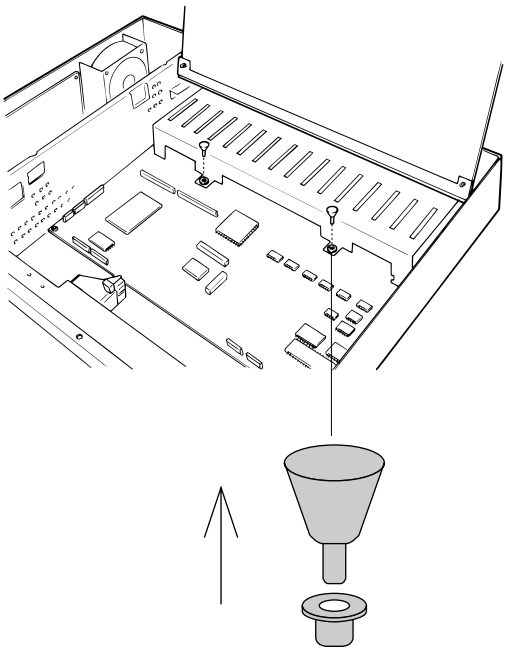

2. Remove the top cover.
3. Remove the four screws on the board as shown below.



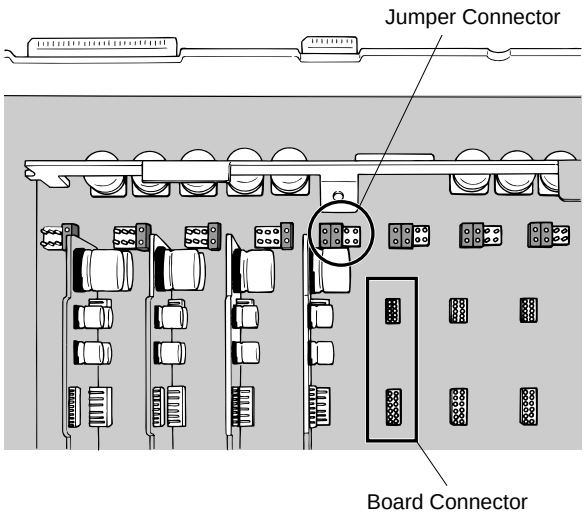
4. Remove the one screw shown below. Then turn over the printed circuit board with the front side up.

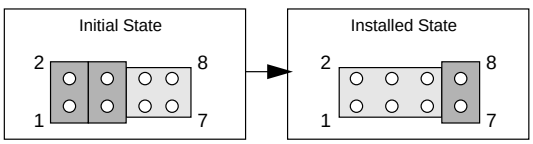


5. Pull out the two knobs from the bracket shown below. Then remove the bracket.

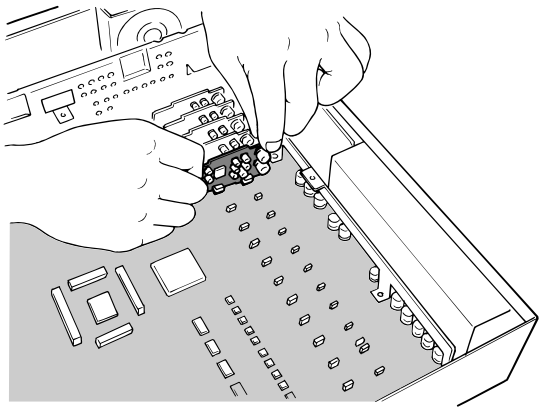


6. Set the jumper connector, located at the top left of the board to be installed, to the position shown below.




7. Insert the board and confirm that the position is correct. Then push it in straight.



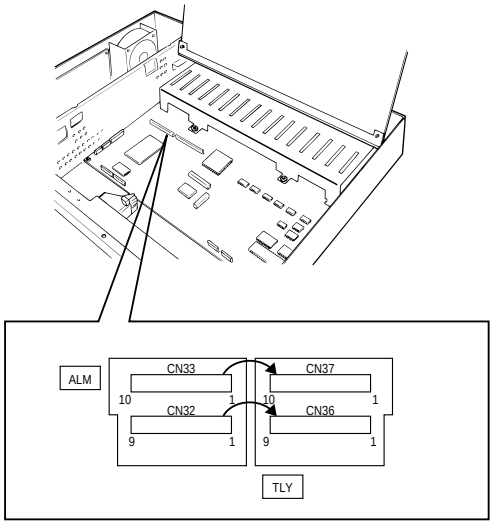
8. After installing the boards, secure them by tightening the screws and knobs shown above.

   **Note:** Some settings for the VD2 signal and control data will be necessary from the setup menu of the Video Multiplexer.

## ■ Tally Output Setting

Allows you to use the Alarm Input Terminal as Tally Output Terminal by changing two internal connections.

1. Disassemble the video multiplexer as described for installing the Data Multiplex Boards on page 4.



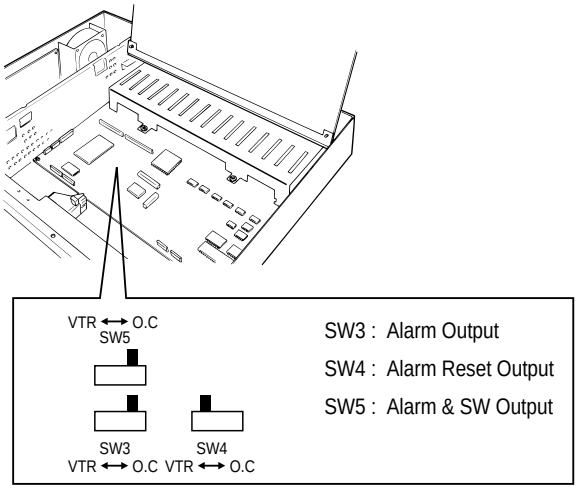

2. Move the two connectors from the ALM side to the TLY side as shown above.
   The relation between the connector numbers and channel numbers is shown in the table below.

| | Alarm Input | Tally Output |
|---|---|---|
| CH9 - CH16 | CN33 | CN37 |
| CH1 - CH8 | CN32 | CN36 |

## ■ Dip Switch Setting

### ● Alarm Output Setting

1. Disassemble the video multiplexer as described for installing the Data Multiplex Boards on page 4.

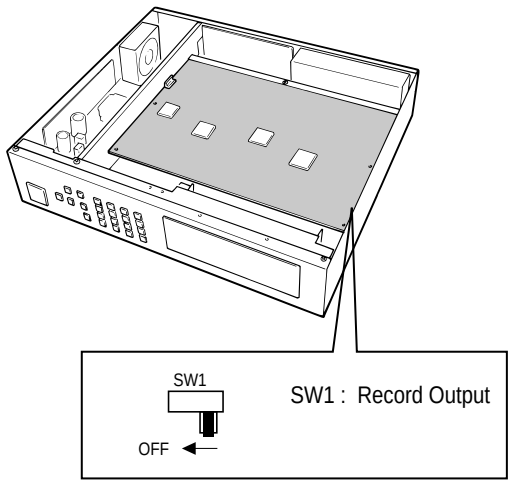



2. Set switches (SW3/SW4/SW5) on the board to choose the alarm control signals as either Open Collector (O.C) or Pulse (VTR).
   Open Collector (O.C): 16V DC 100 mA max.
   Pulse (VTR): +5V DC approx. 500 ms
   The above switch positions are the initial factory settings.

### ● Dummy Black Burst Setting

According to the initial factory setting, the Dummy Black Burst signal is supplied to the REC OUT connector as needed to overwrite any picture displayed by error. If this function is not required, set the switch SW1 to the position shown below.

1. Disassemble the video multiplexer as described for installing the Data Multiplex Boards on page 4.

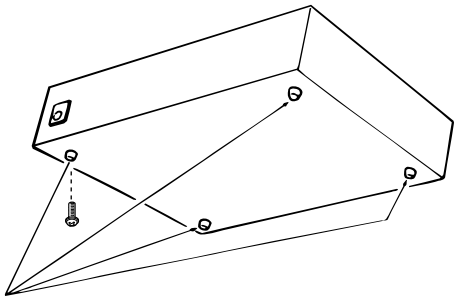



2. Set switch (SW1) on the board to the position shown above.

## ■ WJ-FS616 Video Multiplexer

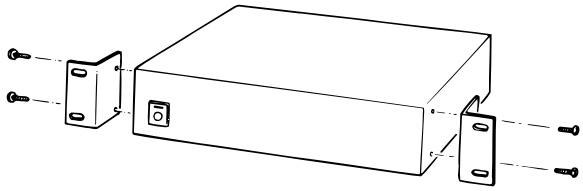
### ● Mounting in the Rack

1. Remove the four rubber feet by removing the four screws on the bottom of the video multiplexer.

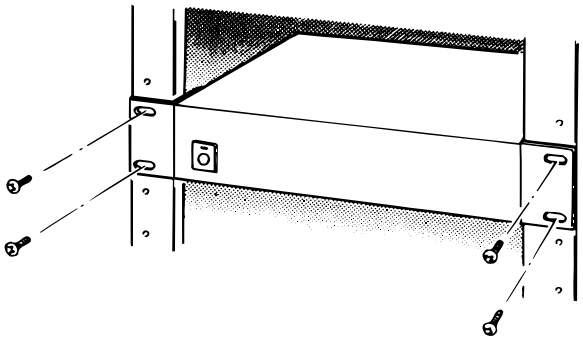


Remove 4 rubber feet

2. Place the rack mounting brackets on both sides of the video multiplexer and tighten with the four supplied screws (M4 X10).



3. Install the video multiplexer with the rack mounting brackets in the rack by using four screws (not included).

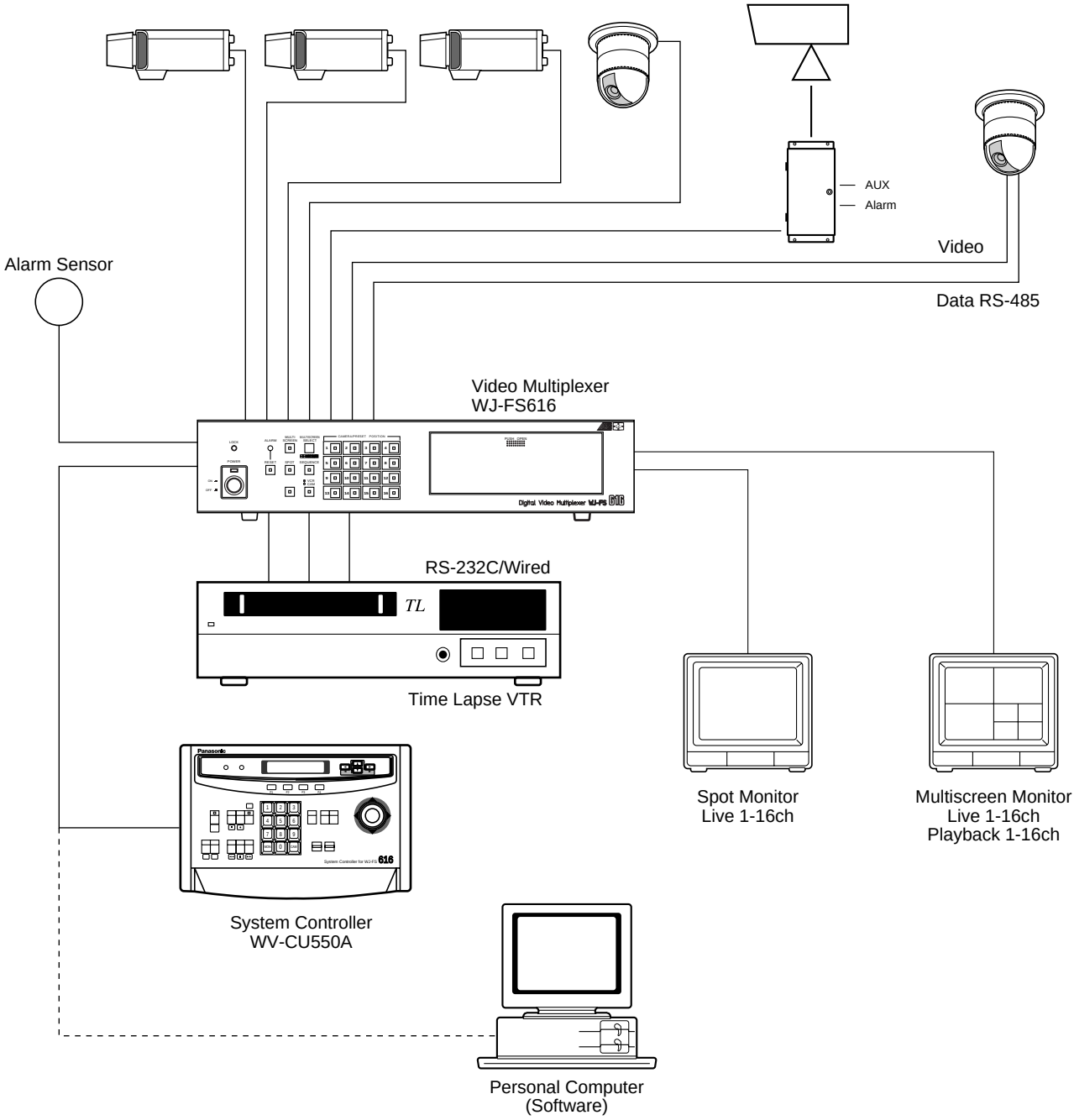


**Cautions**

- Do not block the ventilation opening or slots on the cover to prevent the appliance from overheating. Always keep the temperature in the rack within 50 °C (122 °F).
- Secure the rear of the appliance to the rack by using additional mounting brackets (procured locally) if the rack is subject to vibrations.

# SYSTEM CONNECTIONS

**Shown below is an example of a basic system connection.**




**Basic System Connection**

## ■ Connection with the Camera Sites

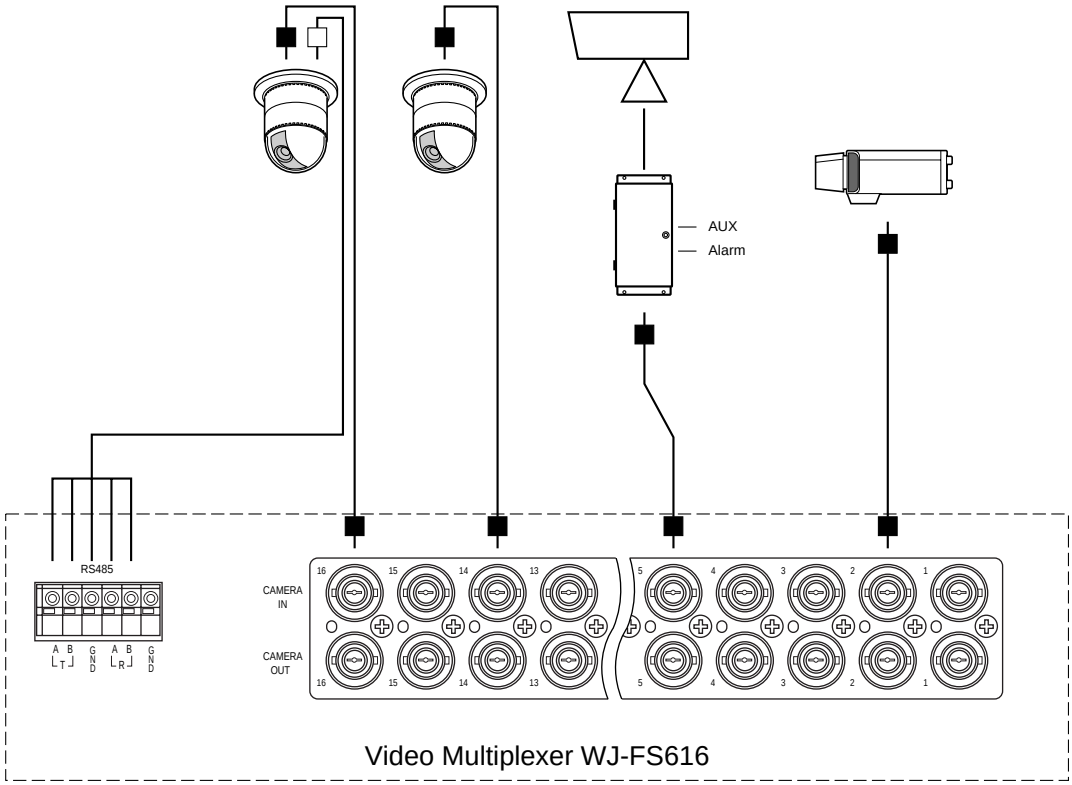
Connect the Camera Site equipment to the Camera Input Connectors (CAMERA IN 1-16) on the rear of the Video Multiplexer.

**Note:** Make sure that the cable length between the camera site and the WJ-FS616 Video Multiplexer is less than 1 200 m (4 000 ft) when using RG-6/U (5C - 2V) or equivalent cables.

Connect the Camera Site equipment to the RS485 Terminal on the rear of the Video Multiplexer, when specified equipment is connected.

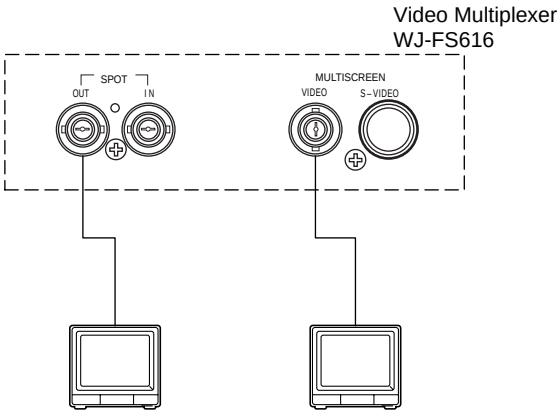
**Note:** If you use cables assembled from locally procured materials, it is important that only high quality, data grade cable, suitable for RS-485 “2-wire twisted pair shielded cable” is used.

Low grade cable will result in unstable operation of the system.




## ■ Connection with the Monitors

Connect the Monitors to the Spot Output (SPOT OUT) Connector and Multiscreen (MULTISCREEN) Connector on the rear of the Video Multiplexer.

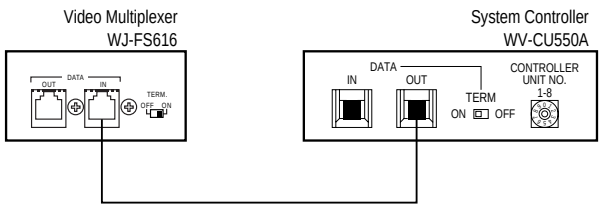



## ■ Connection with the WV-CU550A System Controller

If the supplied 6-conductor cable assembly is used, simply plug one end of the cable into the DATA IN port of the Video Multiplexer and the other end into DATA OUT port on the System Controller.

If you use cables assembled from locally procured materials, it is important that only high quality, data grade cable, suitable for RS-485 “2-wire twisted pair shielded cable” is used.

Low grade cable will result in unstable operation of the system.

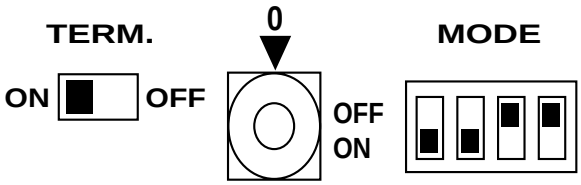


## ● Setting the Termination and Controller Unit Number

The Termination Switch and the Controller Unit Number Switch are located on the rear of the System Controller.
When combined with the WJ-FS616 Video Multiplexer, always keep these switches in the positions shown below.

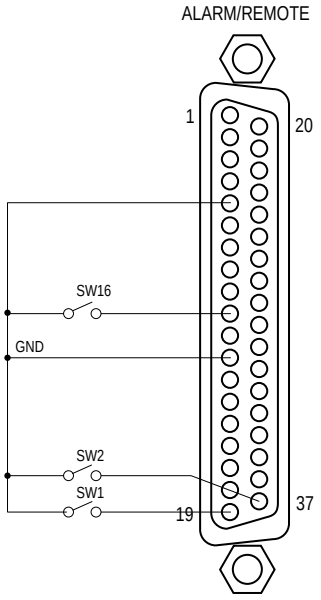
## ● Setting the Mode Selection Switch

The Mode Selection Switch, that selects the operation mode of the System Controller, is located on the rear of the System Controller.
When combined with the WJ-FS616 Video Multiplexer, always keep these switches in the positions shown below.




## ■ Connection with Alarm Sensors

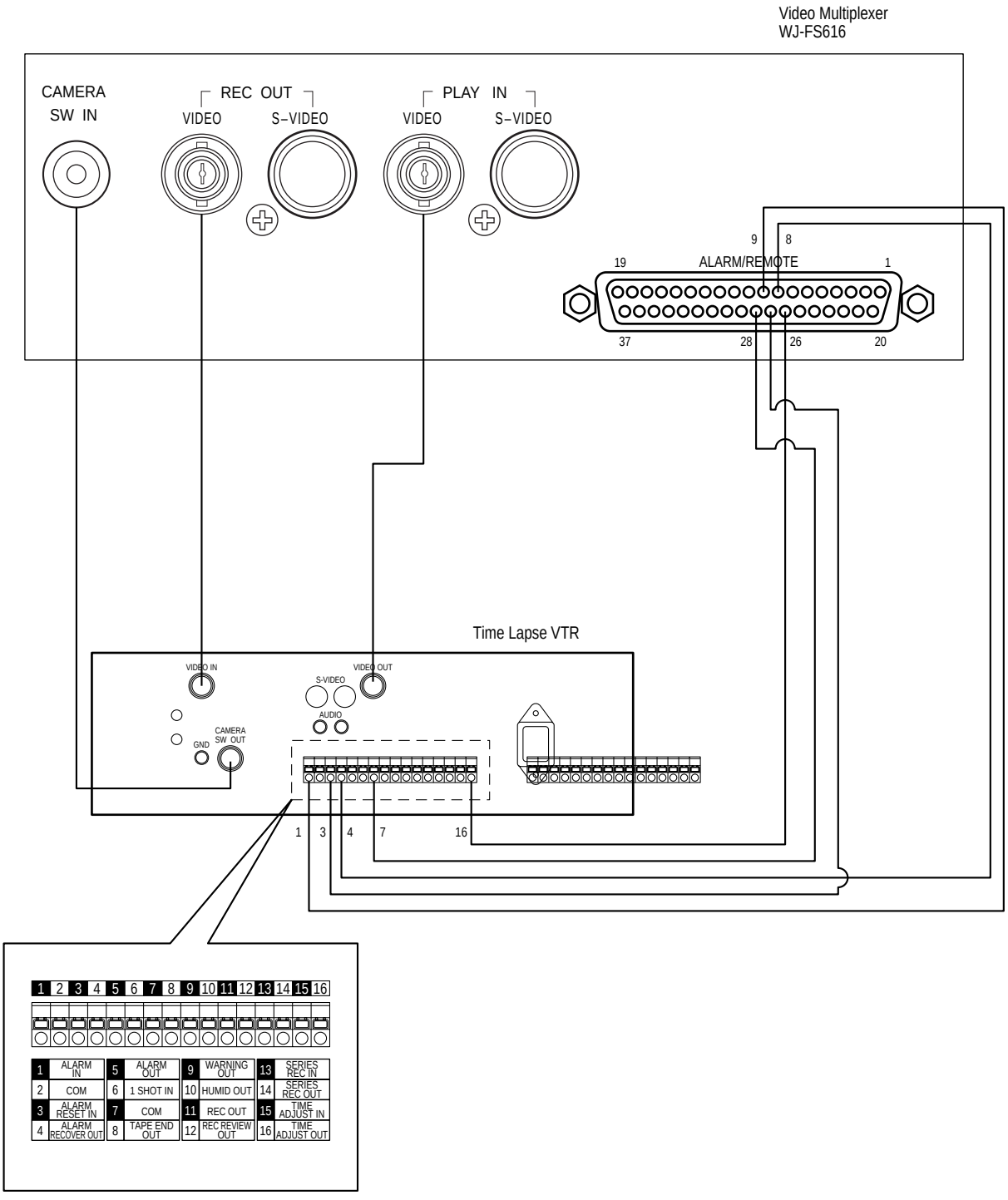
Connect the sensor switches to the Alarm/Remote (ALARM/REMOTE) Control Connector on the rear of the Video Multiplexer as shown in the example below.




| Pin No. | Designation | Pin No. | Designation |
|---|---|---|---|
| 1 | Function | 20 | Still Picture |
| 2 | Electronic Zoom | 21 | VTR/Camera Select |
| 3 | Sequence | 22 | Multiscreen Select |
| 4 | Spot | 23 | Multiscreen |
| 5 | Alarm/Remote Select Input | 24 | Ground |
| 6 | Sequence SW for Spot Output | 25 | Alarm & SW Output |
| 7 | Not Used | 26 | Time Adjust Input |
| 8 | Alarm Recover Input | 27 | Alarm Reset Output |
| 9 | Alarm Output | 28 | Ground |
| 10 | Alarm 16 | 29 | Alarm 15 |
| 11 | Alarm 14 | 30 | Alarm 13 |
| 12 | Ground | 31 | Alarm 12 |
| 13 | Alarm 11 | 32 | Alarm 10 |
| 14 | Alarm 9 | 33 | Ground |
| 15 | Alarm 8 | 34 | Alarm 7 |
| 16 | Alarm 6 | 35 | Alarm 5 |
| 17 | Ground | 36 | Alarm 4 |
| 18 | Alarm 3 | 37 | Alarm 2 |
| 19 | Alarm 1 | | |

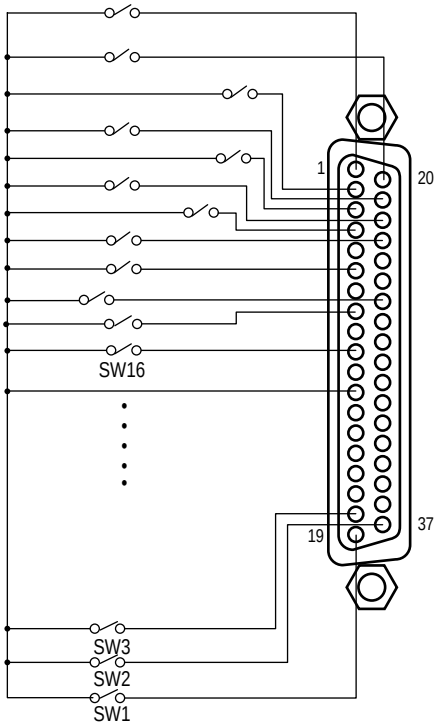
## ■ Connection with the Time Lapse VTR

Connect the Time Lapse VTR as shown in the example below.



## ■ Connection with External Remote Control Switches

Connect the switches (dry contact or open collector input) to the Alarm/Remote (ALARM/REMOTE) Control Connector on the rear of the Video Multiplexer as shown in the example below.



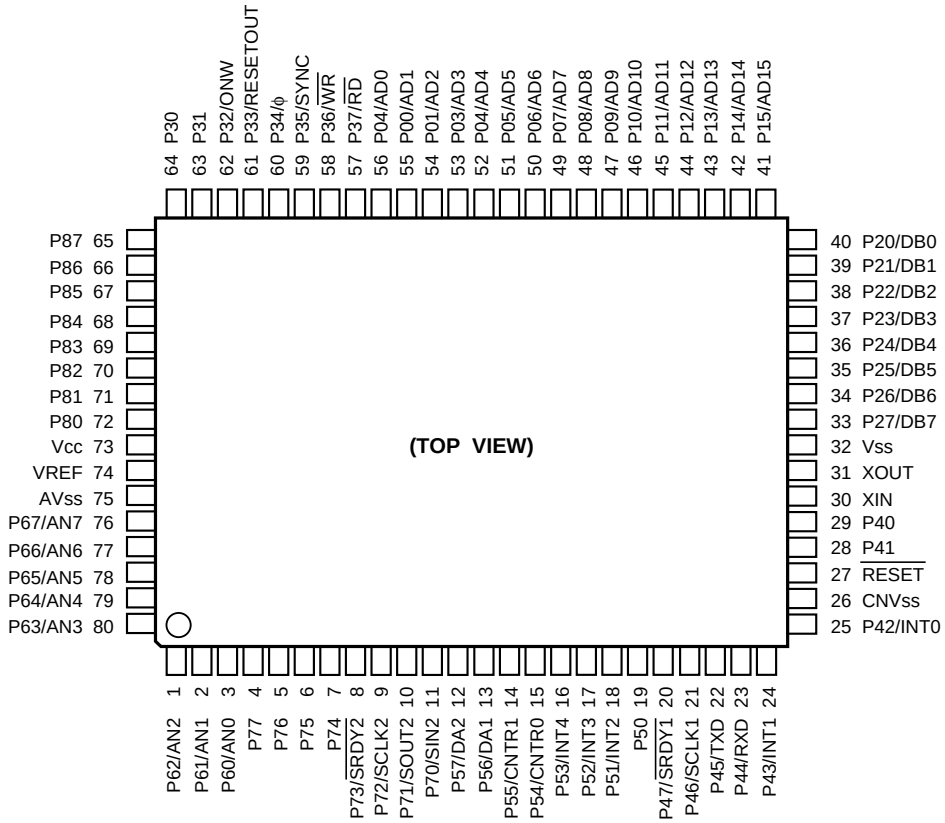

| Pin No. | Designation | Pin No. | Designation |
|---|---|---|---|
| 1 | Function | 20 | Still Picture |
| 2 | Electronic Zoom | 21 | VTR/Camera Select |
| 3 | Sequence | 22 | Multiscreen Select |
| 4 | Spot | 23 | Multiscreen |
| 5 | Alarm/Remote Select Input | 24 | Ground |
| 6 | Sequence SW for Spot Output | 25 | Alarm & SW Output |
| 7 | Not Used | 26 | Time Adjust / Sequence SW |
| 8 | Alarm Recover Input | 27 | Alarm Reset Output |
| 9 | Alarm Output | 28 | Ground |
| 10 | Camera 16 | 29 | Camera 15 |
| 11 | Camera 14 | 30 | Camera 13 |
| 12 | Ground | 31 | Camera 12 |
| 13 | Camera 11 | 32 | Camera 10 |
| 14 | Camera 9 | 33 | Ground |
| 15 | Camera 8 | 34 | Camera 7 |
| 16 | Camera 6 | 35 | Camera 5 |
| 17 | Ground | 36 | Camera 4 |
| 18 | Camera 3 | 37 | Camera 2 |
| 19 | Camera 1 | | |

# CIRCUIT DESCRIPTION

## IC Description

### 1. Switch Board

**1.1.** IC102 on the Switch Board is using the Single Chip 8-Bit Microprocessor IC YWM380670NET. Description of this IC is as follows:

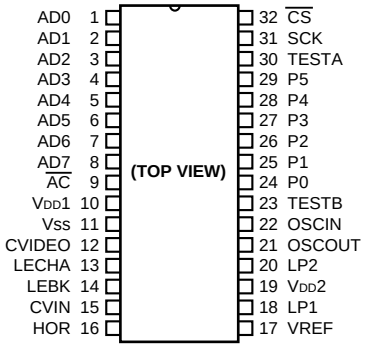



| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | P62/AN2 | O | EEPROM Serial Clock Pulse output terminal. |
| 2 | P61/AN1 | I | EEPROM Serial Data input terminal. |
| 3 | P60/AN0 | O | EEPROM Serial Data output terminal. |
| 4 | P77 | I | IDEQ signal input terminal. |
| 5 | P76 | I/O | Not used. |
| 6 | P75 | I/O | Not used. |
| 7 | P74 | I/O | Not used. |
| 8 | P73/SRDY2 | I/O | Not used. |
| 9 | P72/SCLK2 | I/O | Not used. |
| 10 | P71/SOUT2 | I/O | Not used. |
| 11 | P70/SIN2 | I/O | Not used. |
| 12 | P57/DA2 | I/O | Not used. |
| 13 | P56/DA1 | I/O | Not used. |
| 14 | P55/CNTR1 | I/O | Not used. |
| 15 | P54/CNTR0 | I/O | Not used. |
| 16 | P53/INT4 | I | Interrupt signal input terminal. |
| 17 | P52/INT3 | I | CAMSWS signal input terminal. |
| 18 | P51/INT2 | I | PRVDN signal input terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 19 | P50 | I | CAMSWR signal input terminal. |
| 20 | P47/SRDY1 | I/O | Not used. |
| 21 | P46/SCLK1 | I/O | Not used. |
| 22 | P45/TXD | O | Not used. |
| 23 | P44/RXD | I | Not used. |
| 24 | P43/INT1 | I | Vertical Sync signal input terminal. |
| 25 | P42/INT0 | I | PRVDN signal input terminal. |
| 26 | CNVss | – | Ground terminal. |
| 27 | RESET | I | Reset Pulse input terminal. |
| 28 | P41 | O | Reset Pulse output terminal. |
| 29 | P40 | I | IDON signal input terminal. |
| 30 | XIN | I | Clcok Pulse input terminal. |
| 31 | XOUT | O | Not used. |
| 32 | Vss | – | Ground terminal. |
| 33 | P27/DB7 | I/O | Data Bus terminals. (8-Bit) |
| 34 | P26/DB6 | I/O | |
| 35 | P25/DB5 | I/O | |
| 36 | P24/DB4 | I/O | |

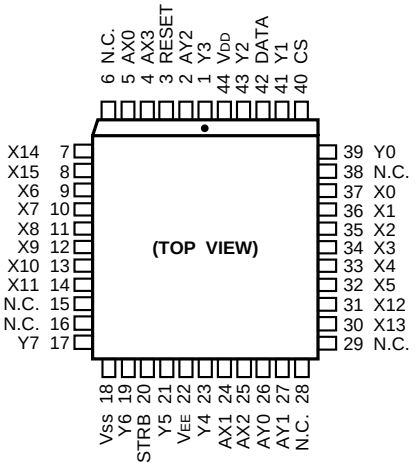
| Pin | Name | I/O | Description |
|---|---|---|---|
| 37 | P23/DB3 | I/O | Data Bus terminals. (8-Bit) |
| 38 | P22/DB2 | I/O | |
| 39 | P21/DB1 | I/O | |
| 40 | P20/DB0 | I/O | |
| 41 | P15/AD15 | O | Address signal output terminals. (16-Bit) |
| 42 | P14/AD14 | O | |
| 43 | P13/AD13 | O | |
| 44 | P12/AD12 | O | |
| 45 | P11/AD11 | O | |
| 46 | P10/AD10 | O | |
| 47 | P09/AD9 | O | |
| 48 | P08/AD8 | O | |
| 49 | P07/AD7 | O | |
| 50 | P06/AD6 | O | |
| 51 | P05/AD5 | O | |
| 52 | P04/AD4 | O | |
| 53 | P03/AD3 | O | |
| 54 | P02/AD2 | O | |
| 55 | P01/AD1 | O | |
| 56 | P00/AD0 | O | |
| 57 | P37/$\overline{RD}$ | O | Read signal output terminal. |
| 58 | P36/$\overline{WR}$ | O | Write signal output terminal. |
| 59 | P35/SYNC | I/O | Not used. |
| 60 | P34/$\phi$ | O | P34/$\phi$ signal output terminal. |
| 61 | P33/ RESETOUT | I/O | Not used. |
| 62 | P32/$\overline{ONW}$ | I | ONW signal input terminal. |
| 63 | P31 | I/O | Not used. |
| 64 | P30 | I/O | Not used. |
| 65 | P87 | O | FS Select signal output terminals. |
| 66 | P86 | O | |
| 67 | P85 | O | |
| 68 | P84 | O | |
| 69 | P83 | O | |
| 70 | P82 | O | |
| 71 | P81 | O | |
| 72 | P80 | O | |
| 73 | Vcc | – | Power supply terminal. |
| 74 | VREF | I | Reference voltage supply terminal. |
| 75 | AVss | – | Ground terminal. |
| 76 | P67/AN7 | I | SW2 signal input terminal. |
| 77 | P66/AN6 | O | Preset signal output terminal. |
| 78 | P65/AN5 | O | OSD Chip Select signal output terminal. |
| 79 | P64/AN4 | O | OSD Serial Clock Pulse output terminal. |
| 80 | P63/AN3 | O | EEPROM Chip Select signal output terminal. |

**1.2.** IC69 on the Switch Board is using the On Screen Display IC YWM35060058.
Description of this IC is as follows:



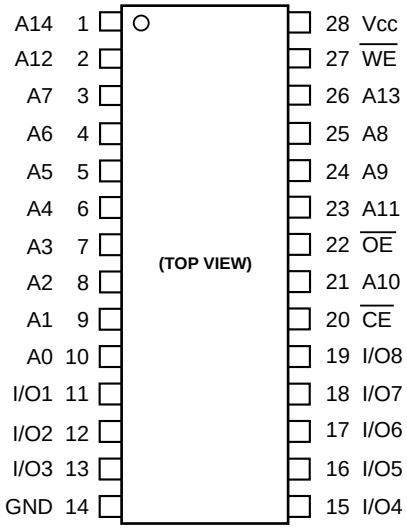

| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | AD0 | I | On Screen Data input terminals. (8-Bit) |
| 2 | AD1 | I | |
| 3 | AD2 | I | |
| 4 | AD3 | I | |
| 5 | AD4 | I | |
| 6 | AD5 | I | |
| 7 | AD6 | I | |
| 8 | AD7 | I | |
| 9 | $\overline{AC}$ | I | Reset Pulse input terminal. |
| 10 | VDD1 | – | Power supply terminal. |
| 11 | Vss | – | Ground terminal. |
| 12 | CVIDEO | O | Video signal output terminal. |
| 13 | LECHA | I | LECHA aignal input terminal. |
| 14 | LEBK | I | LEBK signal input terminal. |
| 15 | CVIN | I | Vertical Sync signal input terminal. |
| 16 | HOR | I | Horizontal Sync signal input terminal. |
| 17 | VREF | I | Reference Voltage supply terminal. |
| 18 | LP1 | I | Line Pulse 1 input terminal. |
| 19 | VDD1 | – | Power supply terminal. |
| 20 | LP2 | I | Line Pulse 2 input terminal. |
| 21 | OSCOUT | O | Crystal Oscillator Connecting terminals. |
| 22 | OSCIN | I | |
| 23 | TESTB | I | Test signal input terminal. |
| 24 | P0 | O | Port Data output terminals. (6-Bit) |
| 25 | P1 | O | |
| 26 | P2 | O | |
| 27 | P3 | O | |
| 28 | P4 | O | |
| 29 | P5 | O | |
| 30 | TESTA | I | Test signal input terminal. |
| 31 | SCK | I | Serial Clock Pulse input terminal. |
| 32 | $\overline{CS}$ | I | Chip Select signal input terminal. |

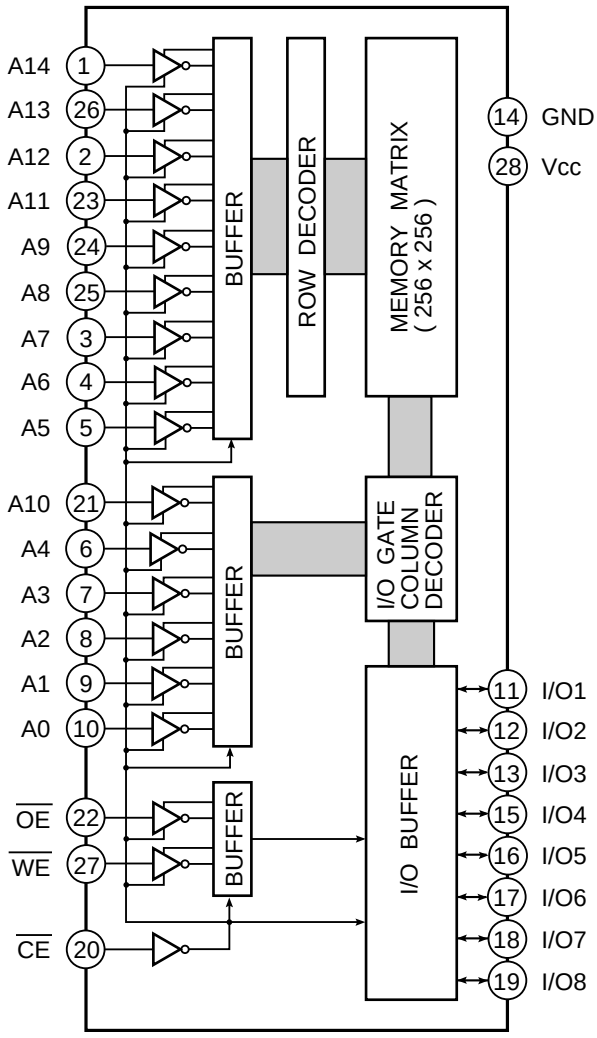
**1.3.** IC86 on the Switch Board is using the 16 X 8 Cross Point Switch IC CD22M3494MQ.
Description of this IC is as follows:




| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | Y3 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 2 | AY2 | I | Y Address signal input terminal. |
| 3 | RESET | I | Reset Pulse input terminal. |
| 4 | AX3 | I | X Address signal input terminal. |
| 5 | AX0 | I | X Address signal input terminal. |
| 6 | N.C. | – | Non connection. |
| 7 | X14 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 8 | X15 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 9 | X6 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 10 | X7 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 11 | X8 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 12 | X9 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 13 | X10 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 14 | X11 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 15 | N.C. | – | Non connection. |
| 16 | N.C. | – | Non connection. |
| 17 | Y7 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 18 | Vss | – | Ground terminal. |
| 19 | Y6 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 20 | STRB | I | Strobe Pulse input terminal. |
| 21 | Y5 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 22 | VEE | – | Negative power supply terminal. |
| 23 | Y4 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 24 | AX1 | I | X Address signal input terminal. |
| 25 | AX2 | I | X Address signal input terminal. |
| 26 | AY0 | I | Y Address signal input terminal. |
| 27 | AY1 | I | Y Address signal input terminal. |
| 28 | N.C. | – | Non connection. |
| 29 | N.C. | – | Non connection. |
| 30 | X13 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 31 | X12 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 32 | X5 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 33 | X4 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 34 | X3 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 35 | X2 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 36 | X1 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 37 | X0 | I/O | Analog or Digital signal input/output terminal (Row Data X0 - X15). |
| 38 | N.C. | – | Non connection. |
| 39 | Y0 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 40 | CS | I | Chip Select signal input terminal. |
| 41 | Y1 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 42 | DATA | I | Data Switching signal input terminal. "H" : Close ; "L" : Open. |
| 43 | Y2 | I/O | Analog or Digital signal input/output terminal (Column Data Y0 - Y7). |
| 44 | VDD | – | Positive power supply terminal. |

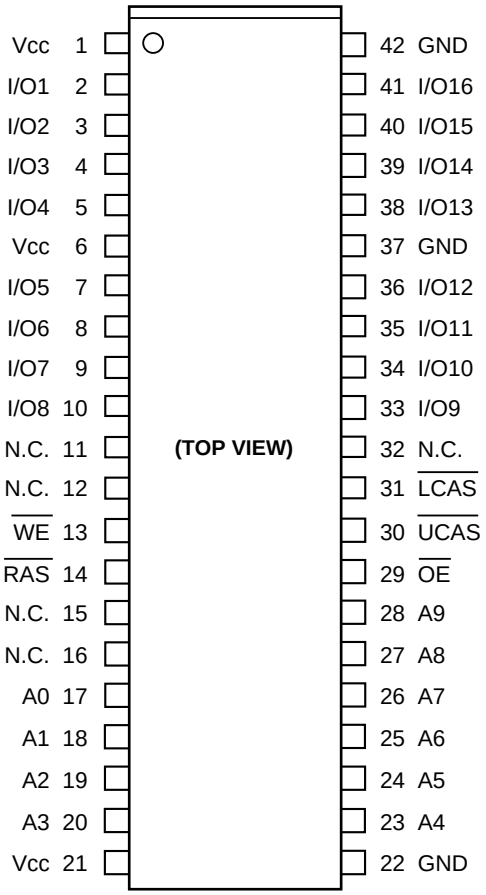
**1.4.** IC99 on the Switch Board is using the 32,765-Word x 8-Bit High Speed CMOS Static RAM IC YWK58257BM70. Description of this IC is as follows:




| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | A14 | I | Address signal input terminals. |
| 2 | A12 | | |
| 3 | A7 | I | |
| 4 | A6 | I | |
| 5 | A5 | I | |
| 6 | A4 | I | |
| 7 | A3 | I | |
| 8 | A2 | I | |
| 9 | A1 | I | |
| 10 | A0 | I | |
| 11 | I/O1 | I/O | Data Input/Output terminals. (8-Bit) |
| 12 | I/O2 | I/O | |
| 13 | I/O3 | I/O | |
| 14 | GND | – | Ground terminal. |
| 15 | I/O4 | I/O | Data Input/Output terminals. (8-Bit) |
| 16 | I/O5 | I/O | |
| 17 | I/O6 | I/O | |
| 18 | I/O7 | I/O | |
| 19 | I/O8 | I/O | |
| 20 | $\overline{CE}$ | I | Chip Enable signal input terminal. |
| 21 | A10 | I | Address signal input terminals. |
| 22 | $\overline{OE}$ | I | Output Enable signal terminal. |
| 23 | A11 | I | Address signal input terminals. |
| 24 | A9 | I | |
| 25 | A8 | I | |
| 26 | A13 | I | |
| 27 | $\overline{WE}$ | I | Write Enable signal input terminal. |
| 28 | Vcc | – | Power Supply terminal. |

**1.5.** IC145-IC150 on the Switch Board are using the 16M-Bit Dynamic RAM IC HM14265DJ68.
Description of this IC is as follows:

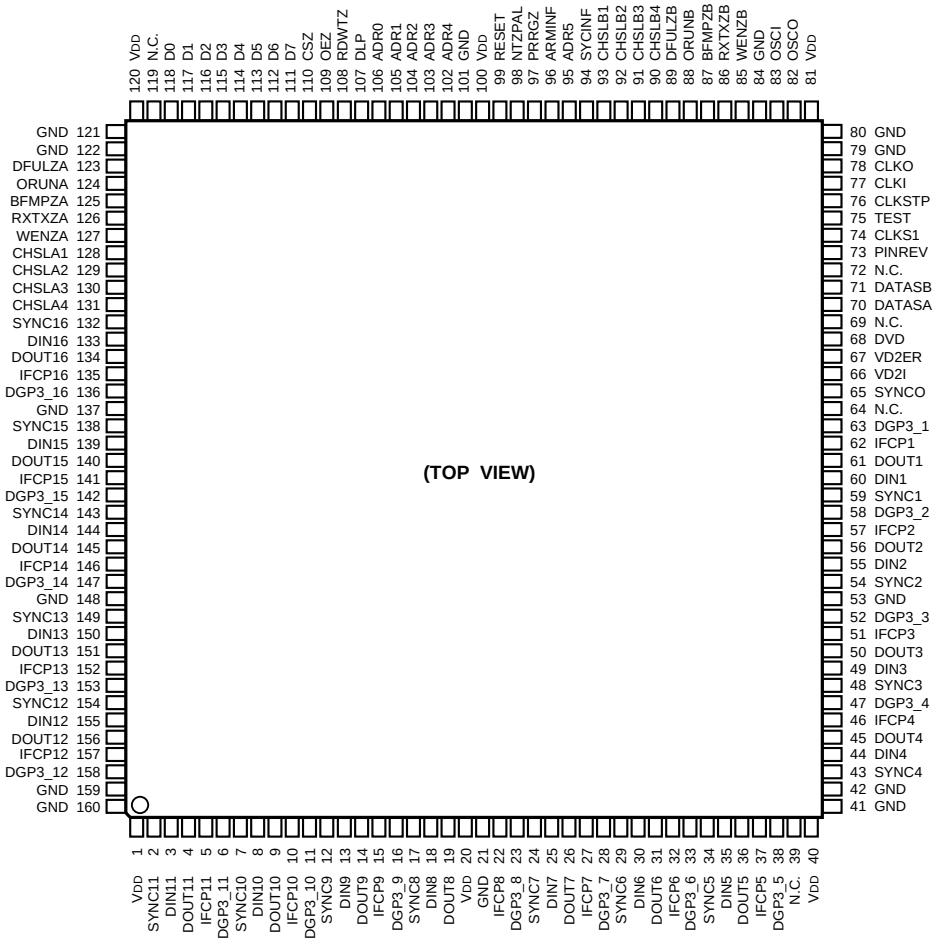



| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | Vcc | – | Power supply terminal. |
| 2 | I/O1 | I/O | Data Bus terminals. (16-Bit) |
| 3 | I/O2 | I/O | |
| 4 | I/O3 | I/O | |
| 5 | I/O4 | I/O | |
| 6 | Vcc | – | Power supply terminal. |
| 7 | I/O5 | I/O | Data Bus terminals. (16-Bit) |
| 8 | I/O6 | I/O | |
| 9 | I/O7 | I/O | |
| 10 | I/O8 | I/O | |
| 11 | N.C. | – | Non connection. |
| 12 | N.C. | – | Non connection. |
| 13 | $\overline{WE}$ | I | Write Enable signal input terminal. |
| 14 | $\overline{RAS}$ | I | Row Address Strobe Pulse input terminal. |
| 15 | N.C. | – | Non connection. |
| 16 | N.C. | – | Non connection. |
| 17 | A0 | I | Address signal input terminals. (10-Bit) |
| 18 | A1 | I | |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 20 | A3 | I | Address signal input terminals. (10-Bit) |
| 21 | Vcc | – | Power supply terminal. |
| 22 | GND | – | Ground terminal. |
| 23 | A4 | I | Address signal input terminals. (10-Bit) |
| 24 | A5 | I | |
| 25 | A6 | I | |
| 26 | A7 | I | |
| 27 | A8 | I | |
| 28 | A9 | I | |
| 29 | $\overline{OE}$ | I | Output Enable signal input terminal. |
| 30 | $\overline{UCAS}$ | I | Upper Column Address Strobe Pulse input terminal. |
| 31 | $\overline{LCAS}$ | I | Lower Column Address Strobe Pulse input terminal. |
| 32 | N.C. | – | Non connection. |
| 33 | I/O9 | I/O | Data Bus terminals. (16-Bit) |
| 34 | I/O10 | I/O | |
| 35 | I/O11 | I/O | |
| 36 | I/O12 | I/O | |
| 37 | GND | – | Ground terminal. |
| 38 | I/O13 | I/O | Data Bus terminals. (16-Bit) |
| 39 | I/O14 | I/O | |
| 40 | I/O15 | I/O | |
| 41 | I/O16 | I/O | |
| 42 | GND | – | Ground terminal. |

# 2. MAIN Board

**2.1.** IC35 on the Main Board is using the CMOS Gate Array Logic IC YWD65804G089.
Description of this IC is as follows:




| Pin | Name | I/O | Description |
|---|---|---|---|
| 1 | VDD | – | Power supply terminal. |
| 2 | SYNC11 | I | 11CH Sync signal input terminal. |
| 3 | DIN11 | I | 11CH Data input terminal. |
| 4 | DOUT11 | O | 11CH Data output terminal. |
| 5 | IFCP11 | O | 11CH IF Clamp Pulse output terminal. |
| 6 | DGP3_11 | O | 11CH DGP3 signal output terminal. |
| 7 | SYNC10 | I | 10CH Sync signal input terminal. |
| 8 | DIN10 | I | 10CH Data input terminal. |
| 9 | DOUT10 | O | 10CH Data output terminal. |
| 10 | IFCP10 | O | 10CH IF Clamp Pulse output terminal. |
| 11 | DGP3_10 | O | 10CH DGP3 signal output terminal. |
| 12 | SYNC9 | I | 9CH Sync signal input terminal. |
| 13 | DIN9 | I | 9CH Data input terminal. |
| 14 | DOUT9 | O | 9CH Data output terminal. |
| 15 | IFCP9 | O | 9CH IF Clamp Pulse output terminal. |
| 16 | DGP3_9 | O | 9CH DGP3 signal output terminal. |

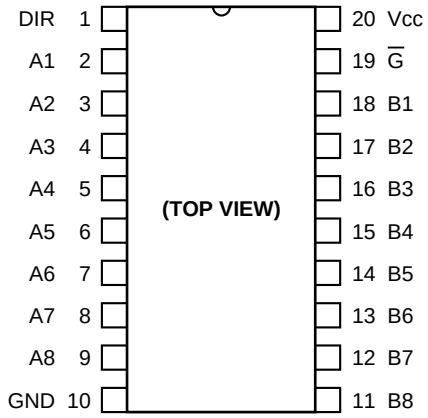
| Pin | Name | I/O | Description |
|---|---|---|---|
| 17 | SYNC8 | I | 8CH Sync signal input terminal. |
| 18 | DIN8 | I | 8CH Data input terminal. |
| 19 | DOUT8 | O | 8CH Data output terminal. |
| 20 | VDD | – | Power supply terminal. |
| 21 | GND | – | Ground terminal. |
| 22 | IFCP8 | O | 8CH IF Clamp Pulse output terminal. |
| 23 | DGP3_8 | O | 8CH DGP3 signal output terminal. |
| 24 | SYNC7 | I | 7CH Sync signal input terminal. |
| 25 | DIN7 | I | 7CH Data input terminal. |
| 26 | DOUT7 | O | 7CH Data output terminal. |
| 27 | IFCP7 | O | 7CH IF Clamp Pulse output terminal. |
| 28 | DGP3_7 | O | 7CH DGP3 signal output terminal. |
| 29 | SYNC6 | I | 6CH Sync signal input terminal. |
| 30 | DIN6 | I | 6CH Data input terminal. |
| 31 | DOUT6 | O | 6CH Data output terminal. |
| 32 | IFCP6 | O | 6CH IF Clamp Pulse output terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 33 | DGP3_6 | O | 6CH DGP3 signal output terminal. |
| 34 | SYNC5 | I | 5CH Sync signal input terminal. |
| 35 | DIN5 | I | 5CH Data input terminal. |
| 36 | DOUT5 | O | 5CH Data output terminal. |
| 37 | IFCP5 | O | 5CH IF Clamp Pulse output terminal. |
| 38 | DGP3_5 | O | 5CH DGP3 signal output terminal. |
| 39 | N.C. | – | Non connection. |
| 40 | $V_{DD}$ | – | Power supply terminal. |
| 41 | GND | – | Ground terminal. |
| 42 | GND | – | Ground terminal. |
| 43 | SYNC4 | I | 4CH Sync signal input terminal. |
| 44 | DIN4 | I | 4CH Data input terminal. |
| 45 | DOUT4 | O | 4CH Data output terminal. |
| 46 | IFCP4 | O | 4CH IF Clamp Pulse output terminal. |
| 47 | DGP3_4 | O | 4CH DGP3 signal output terminal. |
| 48 | SYNC3 | I | 3CH Sync signal input terminal. |
| 49 | DIN3 | I | 3CH Data input terminal. |
| 50 | DOUT3 | O | 3CH Data output terminal. |
| 51 | IFCP3 | O | 3CH IF Clamp Pulse output terminal. |
| 52 | DGP3_3 | O | 3CH DGP3 signal output terminal. |
| 53 | GND | – | Ground terminal. |
| 54 | SYNC2 | I | 2CH Sync signal input terminal. |
| 55 | DIN2 | I | 2CH Data input terminal. |
| 56 | DOUT2 | O | 2CH Data output terminal. |
| 57 | IFCP2 | O | 2CH IF Clamp Pulse output terminal. |
| 58 | DGP3_2 | O | 2CH DGP3 signal output terminal. |
| 59 | SYNC1 | I | 1CH Sync signal input terminal. |
| 60 | DIN1 | I | 1CH Data input terminal. |
| 61 | DOUT1 | O | 1CH Data output terminal. |
| 62 | IFCP1 | O | 1CH IF Clamp Pulse output terminal. |
| 63 | DGP3_1 | O | 1CH DGP3 signal output terminal. |
| 64 | N.C. | – | Non connection. |
| 65 | SYNCO | O | Sync signal output terminal. |
| 66 | VD2I | I | Vertical Drive 2 Pulse input terminal. |
| 67 | VD2ER | O | Vertical Drive 2 Pulse Error signal output terminal. |
| 68 | DVD | I | DVD signal input terminal. |
| 69 | N.C. | – | Non connection. |
| 70 | DATASA | I | SA Data input terminal. |
| 71 | DATASB | I | SB Data input terminal. |
| 72 | N.C. | – | Non connection. |
| 73 | PINREV | I | PINREV signal input terminal. |
| 74 | CLKS1 | I | Clock Pulse input terminal. |
| 75 | TEST | I | Test signal input terminal. |
| 76 | CLKSTP | I | Clock Pulse input terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 77 | CLKI | I | Clock Pulse input terminal. |
| 78 | CLKO | O | Clock Pulse output terminal. |
| 79 | GND | – | Ground terminal. |
| 80 | GND | – | Ground terminal. |
| 81 | $V_{DD}$ | – | Power supply terminal. |
| 82 | OSCO | O | Oscillator signal output terminal. |
| 83 | OSCI | I | Oscillator signal input terminal. |
| 84 | GND | – | Ground terminal. |
| 85 | WENZB | O | Write Enable signal output terminal. |
| 86 | RXTXZB | I | RX/TXZB signal input terminal. |
| 87 | BFMPZB | O | BFMPZB signal output terminal. |
| 88 | ORUNB | O | OPUNB signal output terminal. |
| 89 | DFULZB | O | DFULZB signal output terminal. |
| 90 | CHSLB4 | I | CHSLB4 signal input terminal. |
| 91 | CHSLB3 | I | CHSLB3 signal input terminal. |
| 92 | CHSLB2 | I | CHSLB2 signal input terminal. |
| 93 | CHSLB1 | I | CHSLB1 signal input terminal. |
| 94 | SYCINF | O | SYCINF signal output terminal. |
| 95 | ADR5 | I | Address signal input terminal. |
| 96 | ARMINF | O | ARMINF signal output terminal. |
| 97 | PRRGZ | I | PRRGZ signal input terminal. |
| 98 | NTZPAL | I | NTSC/PAL Select signal input terminal. |
| 99 | RESET | I | Reset Pulse input terminal. |
| 100 | $V_{DD}$ | – | Power supply terminal. |
| 101 | GND | – | Ground terminal. |
| 102 | ADR4 | I | Address signal input terminal. |
| 103 | ADR3 | I | Address signal input terminal. |
| 104 | ADR2 | I | Address signal input terminal. |
| 105 | ADR1 | I | Address signal input terminal. |
| 106 | ADR0 | I | Address signal input terminal. |
| 107 | DLP | I | DLP signal input terminal. |
| 108 | RD/WTZ | I | Read/Write signal input terminal. |
| 109 | OEZ | I | Output Enable signal input terminal. |
| 110 | CSZ | I | Chip Select signal input terminal. |
| 111 | D7 | I/O | Data input/output terminals. (8-Bit) |
| 112 | D6 | I/O | |
| 113 | D5 | I/O | |
| 114 | D4 | I/O | |
| 115 | D3 | I/O | |
| 116 | D2 | I/O | |
| 117 | D1 | I/O | |
| 118 | D0 | I/O | |
| 119 | N.C. | – | Non connection. |
| 120 | $V_{DD}$ | – | Power supply terminal. |
| 121 | GND | – | Ground terminal. |

| Pin | Name | I/O | Description |
|---|---|---|---|
| 122 | GND | – | Ground terminal. |
| 123 | DFULZA | O | DFULZA signal output terminal. |
| 124 | ORUNA | O | ORUNA signal output terminal. |
| 125 | BFMPZA | O | BFMZA signal output terminal. |
| 126 | RX/TXZA | I | RX/TXZA signal input terminal. |
| 127 | WENZA | O | Write Enable signal output terminal. |
| 128 | CHSLA1 | I | CHSLA1 signal input terminal. |
| 129 | CHSLA2 | I | CHSLA2 signal input terminal. |
| 130 | CHSLA3 | I | CHSLA3 signal input terminal. |
| 131 | CHSLA4 | I | CHSLA4 signal input terminal. |
| 132 | SYNC16 | I | 16CH Sync signal input terminal. |
| 133 | DIN16 | I | 16CH Data input terminal. |
| 134 | DOUT16 | O | 16CH Data output terminal. |
| 135 | IFCP16 | O | 16CH IF Clamp Pulse output terminal. |
| 136 | DGP3_16 | O | 16CH DGP3 signal output terminal. |
| 137 | GND | – | Ground terminal. |
| 138 | SYNC15 | I | 15CH Sync signal input terminal. |
| 139 | DIN15 | I | 15CH Data input terminal. |
| 140 | DOUT15 | O | 15CH Data output terminal. |
| 141 | IFCP15 | O | 15CH IF Clamp Pulse output terminal. |
| 142 | DGP3_15 | O | 15CH DGP3 signal output terminal. |
| 143 | SYNC14 | I | 14CH Sync signal input terminal. |
| 144 | DIN14 | I | 14CH Data input terminal. |
| 145 | DOUT14 | O | 14CH Data output terminal. |
| 146 | IFCP14 | O | 14CH IF Clamp Pulse output terminal. |
| 147 | DGP3_14 | O | 14CH DGP3 signal output terminal. |
| 148 | GND | – | Ground terminal. |
| 149 | SYNC13 | I | 13CH Sync signal input terminal. |
| 150 | DIN13 | I | 13CH Data input terminal. |
| 151 | DOUT13 | O | 13CH Data output terminal. |
| 152 | IFCP13 | O | 13CH IF Clamp Pulse output terminal. |
| 153 | DGP3_13 | O | 13CH DGP3 signal output terminal. |
| 154 | SYNC12 | I | 12CH Sync signal input terminal. |
| 155 | DIN12 | I | 12CH Data input terminal. |
| 156 | DOUT12 | O | 12CH Data output terminal. |
| 157 | IFCP12 | O | 12CH IF Clamp Pulse output terminal. |
| 158 | DGP3_12 | O | 12CH DGP3 signal output terminal. |
| 159 | GND | – | Ground terminal. |
| 160 | GND | – | Ground terminal. |

**2.2.** IC60 on the Main Board is using the Octal 3-State Inverted Bus Transceivers IC MC74AC640DT. Description of this IC is as follows:




**Truth Table**

| INPUTS | | OPERATION |
|---|---|---|
| $\overline{G}$ | DIR | |
| L | L | $\overline{B}$ Data to A Bus |
| L | H | $\overline{A}$ Data to B Bus |
| H | ✻ | Isolation |

✻ : Don't care.

# ADJUSTMENT PROCEDURE

## 1. Test Equipments Required

- The following Test Equipments are required for adjustment of the Video Multiplexer WJ-FS616.
- Underscanned Colour Video Monitor
- Video Monitor
- Vectorscope
- Waveform Monitor
- Video Signal Generator
  - Colour Bar Signal (Set up 7.5%)
  - Ramp Signal (without Carrier)
  - Sweep Signal or Multi Burst Signal (more than 10MHz)
- Oscilloscope
- Frequency Counter
- Digital Voltmeter
- Black and White Video Camera

## 2. Disassembling Procedure for the Adjustment

- Referring to Fig. 2-1, remove five screws that secure the Upper Cover and remove the Upper Cover.

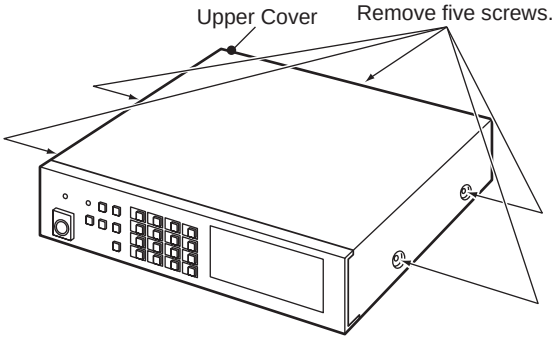



**Fig. 2-1**

- Referring to Fig. 2-2, remove six screws that secure the Switch Board Ass'y and lift up the Switch Board Ass'y.

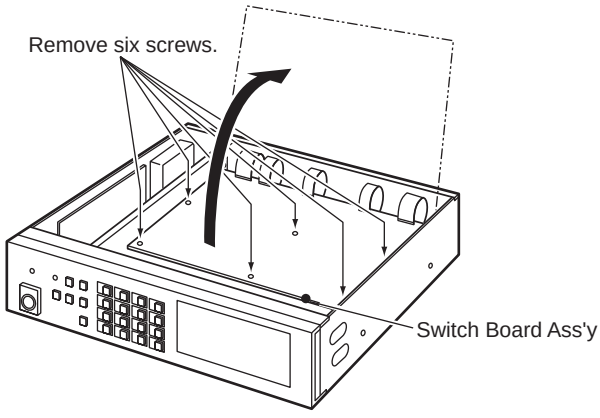



**Fig. 2-2**

## 3. Connection and Setting up for Adjustment

### 3.1. Connection

- Fig. 3-1 shows the connecting diagram for adjustment of the WJ-FS616.

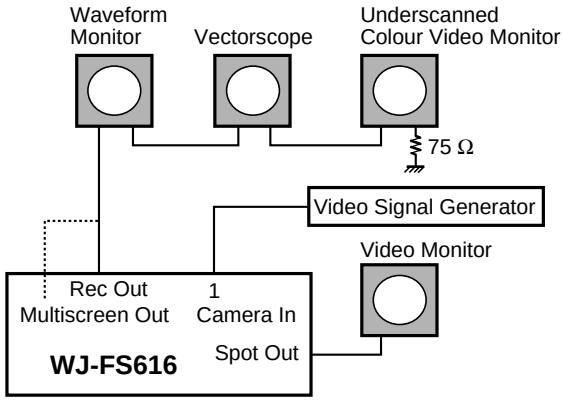



**Fig 3-1**

- Connect the Underscanned Colour Video Monitor through the Vectorscope and Waveform Monitor to the Recording Output Connector on the Rear Panel of the WJ-FS616.
- Terminate the input terminal of the Underscanned Colour Video Monitor with 75 Ω.
- Connect the Video Monitor to the Spot Output Connector on the Rear Panel of the WJ-FS616.
- Connect the Signal Generator to the Camera Input Connector 1 on the Rear Panel of the WJ-FS616.
- Connect the prove of the Digital Voltmeter, Oscilloscope or Frequency Counter at the desired Test Point in each adjustment step.

### 3.2. Setting Up

- This adjustment should be done after 30 minutes warm up of the WJ-FS616.

**<Initial Setting>**

- Before start to adjust should be done with this Initial Setting as follows:
- Turn the Power Switch off.
- Turn the Lock Switch (SW127) on the Pocket Board to Off position.
- Set the Data Termination Switch (SW401) on the Modular Board to On position.
- Set the RS485 Termination Switch (SW602) on the Communication Board to On position.
- Set the Line Select Switch (SW601) on the Communication Board to "4" position.

**<Setting for Main Board>**

- Setting of the Jumpers and the Switches as follows:

**Jumpers:**

| | 1–2 | 3–4 | 5–6 | 7–8 | Remarks |
|---|---|---|---|---|---|
| CN201, CN251, CN301, CN351 | OPEN | OPEN | OPEN | JP | 2 4 6 8<br>1 3 5 7 |
| CN401, CN451, CN501, CN551<br>CN601, CN651, CN701, CN751, CN801, CN851, CN901, CN951 | JP<br>JP | JP<br>JP | OPEN<br>OPEN | OPEN<br>OPEN | 2 4 6 8<br>1 3 5 7 |

**Slide Switches:**

SW2 .....PROM
SW3 and SW5.....O.C.
SW4 .....0/5V
SW7 .....PAL

**DIP Switch:**

| SW6 | Status | Remarks |
|---|---|---|
| 1 | ON | ON<br>OFF<br>1 2 3 4 |
| 2 | ON | |
| 3 | ON | |
| 4 | OFF | |

**<Setting for Switch Board>**

- Set the Knob of SW1 to the silk screen side on the Switch Board (the Black Picture Insert Mode to the Record Out signal).
- Set the Knob of SW2 to the opposite side of the silk screen on the Switch Board (set the ACC to Off mode).

**<Start up the WJ-FS616 by the Test Program>**

- Turn the Power Switch off.
- Turn the Power Switch on while pressing the Camera Selection Buttons/Preset Position Buttons 5, 1 and 6 on the Front Panel.
- The Idle Menu will be displayed on the Video Monitor which connected on the Spot Output Connector as shown in Table 3-1.

SELF CHECK

IDLE

**Table 3-1**

- Executes the Test Programs for each step as follows:
  1. Select the Test Program Number by the Camera Selection Buttons/Preset Position Buttons **1** to **10** and execute the Camera Selection Button/Preset Position Button **16**.
     **Note :** The Camera Selection Button/Preset Position Button 10 is used as " **0** ".
  2. For example : Execute Program Number **040** Press the Camera Selection Button/Preset Position Button **4**, **10** and **16** sequentially.
     **Note :** Do not need first " **0** ".
- Operating Procedure of the Test Programs for each step as follows:
  1. Decrease by one step (–1) from the current value by the Direction Arrow Button " **LEFT** " on the Pocket Board.
  2. Increase by one step (+1) from the current value by the Direction Arrow Button " **RIGHT** " on the Pocket Board.
- Finishing the Test Programs for each step as follows:
  1. The Data decided by pressing the Home/Set Button on the Pocket Board at once.
     Be able to re-adjust the each step in this condition.
     Press the Home/Set Button in this condition once again, return to the Idle mode.
  2. Press the Reset Button on the Front Panel, the Data is not renewed and return to the Idle mode.

# 4. Adjustment Procedure

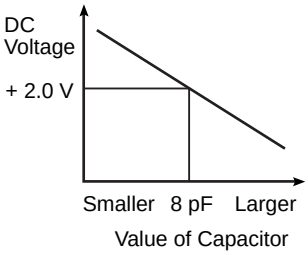
- Refer to the Location of the Test Points and Adjusting Controls on the page 28.

### (1). H. Lock Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP29 (H. LOCK-1)** | **Switch Board** |
| | **TP39 (H. LOCK-2)** | **Switch Board** |
| **Adjust:** | **C958 (H. LOCK-1)** | **Switch Board** |
| | **C483 (H. LOCK-2)** | **Switch Board** |

- Supply the Colour Bar signal to the Gen-Lock Input Connector on the Rear Panel.
- Connect the Oscilloscope to TP29.
- Execute Program Number **097** Press the Camera Selection Button/Preset Position Button **9**, **7** and **16** sequentially.
- Make sure that the DC voltage at TP29 is between + 1.5 V and + 3.5 V.

- If not, change the Capacitor (C958) while referring to Fig. 4-1.
- Change the probe of the Oscilloscope from TP29 to TP39.
- Execute Program Number **099** Press the Camera Selection Button/Preset Position Button **9**, **9** and **16** sequentially.
- Make sure that the DC voltage at TP39 is between + 1.5 V and + 3.5 V.
- If not, change the Capacitor (C483) while referring to Fig. 4-1.




Capacitor to be changed.

| Part Number | Description |
|---|---|
| YF400060CHDT | 6 pF (Smaller) |
| YF400070CHDT | 7 pF |
| YW400080CHJT | 8 pF (Typical) |
| YW400090CHDT | 9 pF |
| YF400100CHJT | 10 pF (Larger) |

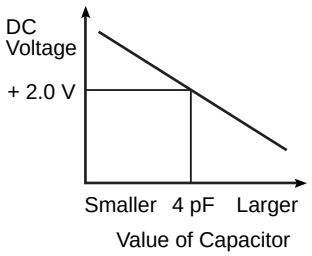
**Fig 4-1**

- Press the Reset Button.

### (2). SC Lock Adjustment

**Test Point:** **TP35 (SC LOCK-1)** **Switch Board**
**TP36 (SC LOCK-2)** **Switch Board**
**Adjust:** **C936 (SC LOCK-1)** **Switch Board**
**C278 (SC LOCK-2)** **Switch Board**

- Supply the Colour Bar signal to the Gen-Lock Input Connector on the Rear Panel.
- Connect the Oscilloscope to TP35.
- Execute Program Number **097** Press the Camera Selection Button/Preset Position Button **9**, **7** and **16** sequentially.
- Make sure that the DC voltage at TP35 is between + 1.5 V and + 3.5 V.
- If not, change the Capacitor (C936) while referring to Fig. 4-2.
- Change the probe of the Oscilloscope from TP35 to TP36.
- Execute Program Number **099** Press the Camera Selection Button/Preset Position Button **9**, **9** and **16** sequentially.
- Make sure that the DC voltage at TP36 is between + 1.5 V and + 3.5 V.
- If not, change the Capacitor (C278) while referring to Fig. 4-2.




Capacitor to be changed.

| Part Number | Description |
|---|---|
| YF400020CHDT | 2 pF (Smaller) |
| YF400030CHDT | 3 pF |
| 400040CHDT | 4 pF (Typical) |
| YW400050CHJT | 5 pF |
| YF400060CHDT | 6 pF (Larger) |

**Fig 4-2**

- Press the Reset Button.

### (3). FSC Frequency Adjustment

**Test Point:** **TP50 (FSC)** **Switch Board**
**Adjust:** **VR37 (FSC)** **Switch Board**

- Disconnect all input signals from the WJ-FS616.
- Connect the Frequency Counter to TP50.
- Adjust VR37 to obtain 13.500000 MHz ± 20 Hz.
- Connect the Oscilloscope to TP50 and confirm that the DC voltage at TP50 is between + 1.5 V and + 3.5 V.

### (4). Timing Adjustment

**Test Point:** **Recording Output Connector** **Rear Panel**
**TP73 (TIMING)** **Switch Sub Board**
**Adjust:** **VR1 (TIMING-1)** **Switch Sub Board**
**VR2 (TIMING-2)** **Switch Sub Board**

- Connect the Oscilloscope to TP73 on the Switch Sub Board.
- Adjust VR1 so that the Rising Edge of the Timing Pulse becomes 2H before the Start of the Video signal as shown Fig. 4-3.

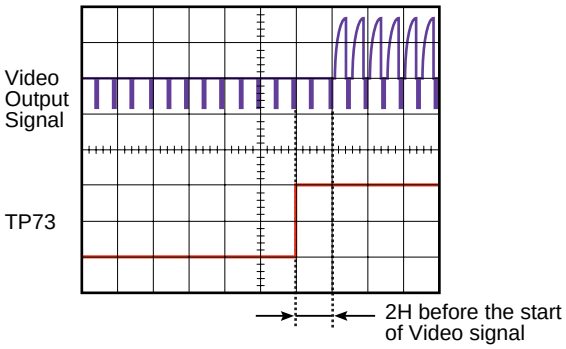



**Fig 4-3**

- Adjust VR2 so that the Falling Edge of the Timing Pulse becomes 8H before the End of the Video signal as shown Fig. 4-4.

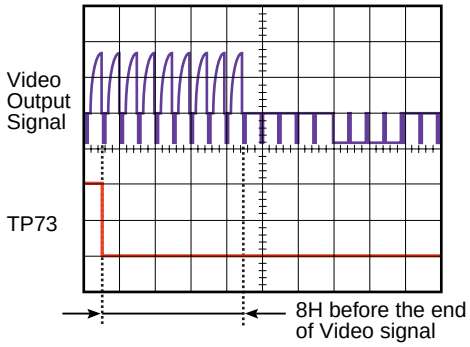



**Fig 4-4**

### (5). PLL DC Adjustment

| | | |
|---|---|---|
| **Test Point:** | **TP28 (PLL DC-0)** | **Switch Board** |
| | **TP30 (PLL DC-1)** | **Switch Board** |
| | **TP32 (PLL DC-2)** | **Switch Board** |
| | **TP34 (PLL DC-3)** | **Switch Board** |
| | **TP37 (PLL DC-4)** | **Switch Board** |
| | **TP38 (PLL DC-5)** | **Switch Board** |
| | **TP41 (PLL DC-6)** | **Switch Board** |
| | **TP42 (PLL DC-7)** | **Switch Board** |
| **Adjust:** | **L116 (PLL DC-0)** | **Switch Board** |
| | **L117 (PLL DC-1)** | **Switch Board** |
| | **L118 (PLL DC-2)** | **Switch Board** |
| | **L119 (PLL DC-3)** | **Switch Board** |
| | **L121 (PLL DC-4)** | **Switch Board** |
| | **L122 (PLL DC-5)** | **Switch Board** |
| | **L123 (PLL DC-6)** | **Switch Board** |
| | **L124 (PLL DC-7)** | **Switch Board** |

- Supply the Colour Bar signal to the Camera Input Connectors 1 on the Rear Panel.
- Turn the Power Switch off.
- Turn the Power Switch on while pressing the Camera Selection Buttons/Preset Position Buttons 5, 1 and 6 on the Front Panel.
  The Idle Menu will be displayed as shown in Table 4-1.

| SELF CHECK |
|---|
| IDLE |

**Table 4-1**

- Execute Program Number **042** Press the Camera Selection Button/Preset Position Button **4**, **2** and **16** sequentially, the Menu as shown in Table 4-2 will be displayed.

| SELF CHECK | | | |
|---|---|---|---|
| 042 | H PHASE(R-2) | 00-0F | 0C |

**Table 4-2**

- Connect the Digital Voltmeter to TP28.
- Adjust L116 to obtain 2.0 ± 0.3 V DC.
- Change the connection of the Digital Voltmeter to TP30.
- Adjust L117 to obtain 2.0 ± 0.3 V DC.
- Change the connection of the Digital Voltmeter to TP32.
- Adjust L118 to obtain 2.0 ± 0.3 V DC.
- Change the connection of the Digital Voltmeter to TP34.
- Adjust L119 to obtain 2.0 ± 0.3 V DC.
- Press the Reset Button.
- Execute Program Number **044** Press the Camera Selection Button/Preset Position Button **4**, **4** and **16** sequentially, the Menu as shown in Table 4-3 will be displayed.

| SELF CHECK | | | |
|---|---|---|---|
| 044 | H PHASE(M-2) | 00-0F | 0C |

**Table 4-3**

- Connect the Digital Voltmeter to TP37.
- Adjust L121 to obtain 2.0 ± 0.3 V DC.
- Change the connection of the Digital Voltmeter to TP38.
- Adjust L122 to obtain 2.0 ± 0.3 V DC.
- Change the connection of the Digital Voltmeter to TP41.
- Adjust L123 to obtain 2.0 ± 0.3 V DC.
- Change the connection of the Digital Voltmeter to TP42.
- Adjust L124 to obtain 2.0 ± 0.3 V DC.
- Press the Reset Button.

### (6). Output Gain Adjustment

| | | |
|---|---|---|
| **Test Point:** | **Recording Output Connector** | **Rear Panel** |
| **Adjust:** | **VR18 (BORDER-1)** | **Switch Board** |
| | **VR36 (BURST-1)** | **Switch Board** |
| | **VR20 (BORDER-2)** | **Switch Board** |
| | **VR35 (BURST-2)** | **Switch Board** |

- Disconnect all signal from the Camera Input Connectors 1 on the Rear Panel.

- Execute Program Number **042** Press the Camera Selection Button/Preset Position Button **4**, **2** and **16** sequentially, the Menu as shown in Table 4-4 will be displayed.

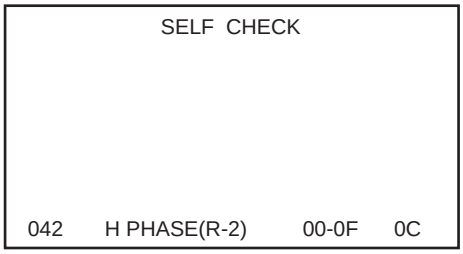



**Table 4-4**

- Connect the terminated Oscilloscope with 75Ω to the Recording Output Connector on the Rear Panel.
- Adjust VR18 so that the Border signal level becomes 700 ± 14 mV as shown in Fig. 4-5.
- Adjust VR36 so that the Burst signal level becomes 300 ± 14 mV as shown in Fig. 4-5.
- Confirm that the Sync signal level becomes 300 ± 30 mV as shown in Fig. 4-5.

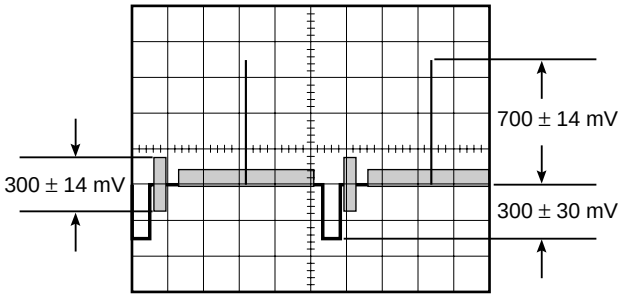



**Fig 4-5**

- Press the Reset Button.
- Change the connection of the terminated Oscilloscope with 75Ω to the Multiscreen Output Connector on the Rear Panel.
- Execute Program Number **044** Press the Camera Selection Button/Preset Position Button **4**, **4** and **16** sequentially, the Menu as shown in Table 4-5 will be displayed.

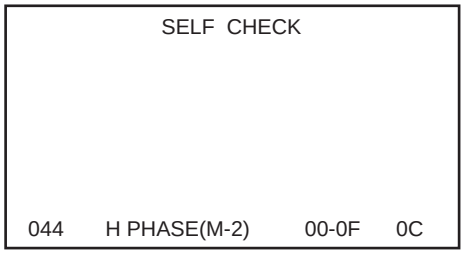



**Table 4-5**

- Adjust VR20 so that the Border signal level becomes 700 ± 14 mV as shown in Fig. 4-6.
- Adjust VR35 so that the Burst signal level becomes 300 ± 14 mV as shown in Fig. 4-6.
- Confirm that the Sync signal level becomes 300 ± 30 mV as shown in Fig. 4-6.

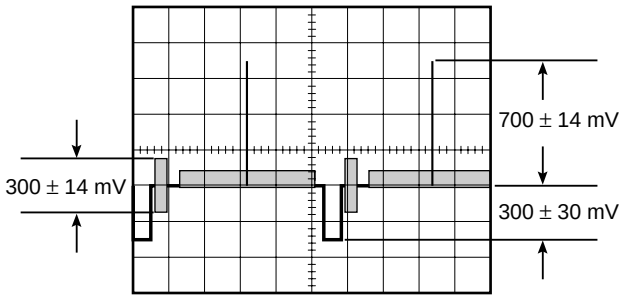



**Fig 4-6**

- Press the Reset Button.

### (7). Y Pedestal, Y Gain, Chroma Gain and Chroma Phase Adjustment

| | | |
|---|---|---|
| **Test Point:** | **Recording Output Connector** | **Rear Panel** |
| **Adjust:** | **VR25 (Y GAIN-0)** | **Switch Board** |
| | **VR26 (Y GAIN-1)** | **Switch Board** |
| | **VR27 (Y GAIN-2)** | **Switch Board** |
| | **VR28 (Y GAIN-3)** | **Switch Board** |
| | **VR29 (Y GAIN-4)** | **Switch Board** |
| | **VR30 (Y GAIN-5)** | **Switch Board** |
| | **VR31 (Y GAIN-6)** | **Switch Board** |
| | **VR32 (Y GAIN-7)** | **Switch Board** |
| | **VR33 (VBS Y GAIN)** | **Switch Board** |
| | **VR22 (Y/C Y GAIN)** | **Switch Board** |
| | **VR23 (Y/C C GAIN)** | **Switch Board** |
| | **VR2 (C PHASE-0)** | **Switch Board** |
| | **VR4 (C PHASE-1)** | **Switch Board** |
| | **VR6 (C PHASE-2)** | **Switch Board** |
| | **VR8 (C PHASE-3)** | **Switch Board** |
| | **VR9 (C PHASE-4)** | **Switch Board** |
| | **VR12 (C PHASE-5)** | **Switch Board** |
| | **VR14 (C PHASE-6)** | **Switch Board** |
| | **VR16 (C PHASE-7)** | **Switch Board** |
| | **VR34 (C PHASE)** | **Switch Board** |

- Supply the Ramp signal to the Camera Input Connectors 1, PLAY-IN Connector and S-Video Connector of the Playback Input Connector on the Rear Panel.

  **Note :** The supplied signals to the Camera Input Connector 1 and S-Video Connector must be synchronized.
- Connect the terminated Oscilloscope with 75Ω to the Recording Output Connector on the Rear Panel.

- Execute Program Number **033** Press the Camera Selection Button/Preset Position Button **3**, **3** and **16** sequentially, the Menu as shown in Table 4-6 will be displayed.

| SELF CHECK | | | |
|---|---|---|---|
| | | | |
| | | | |
| 033 | Y PED(R-1A) | 00-3F | 23 |

**Table 4-6**

- Adjust Direction Arrow Buttons **LEFT** and/or **RIGHT** so that the Pedestal level becomes 0 $^{+7}_{-0}$ mV as shown in Fig. 4-7.
- Adjust VR25 so that the Luminance signal level becomes 700 ± 14 mV as shown in Fig. 4-7.

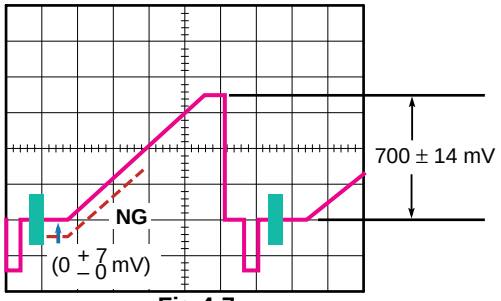



**Fig 4-7**

- Repeat adjust both the Pedestal level and Luminance level are satisfactory.
- Press the Home/Set Button twice.
- Adjust rest of Pedestal and Luminance levels on Table 4-7 with same procedure as above.

| Program Number | Test Point | Adjust |
|---|---|---|
| 034 | Recording Output Connector | Pedestal level by Arrow Buttons<br>Luminance level by VR26 |
| 035 | Recording Output Connector | Pedestal level by Arrow Buttons<br>Luminance level by VR27 |
| 036 | Recording Output Connector | Pedestal level by Arrow Buttons<br>Luminance level by VR28 |
| 037 | Multiscreen Output Connector | Pedestal level by Arrow Buttons<br>Luminance level by VR29 |
| 038 | Multiscreen Output Connector | Pedestal level by Arrow Buttons<br>Luminance level by VR30 |
| 039 | Multiscreen Output Connector | Pedestal level by Arrow Buttons<br>Luminance level by VR31 |
| 040 | Multiscreen Output Connector | Pedestal level by Arrow Buttons<br>Luminance level by VR32 |
| 049 | Multiscreen Output Connector | Luminance level by VR22 |
| 056 | Multiscreen Output Connector | Luminance level by VR33 |

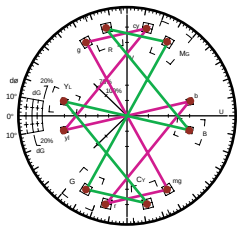
**Table 4-7**

- Change the Ramp signal to the Colour Bar signal.
- Execute Program Number **033** Press the Camera Selection Button/Preset Position Button **3**, **3** and **16** sequentially, the Menu as shown in Table 4-8 will be displayed.

| SELF CHECK | | | |
|---|---|---|---|
| | | | |
| | | | |
| 033 | Y PED(R-1A) | 00-3F | 23 |

**Table 4-8**

- Adjust VR2 so that the Chroma Vectors position their respective boxes as shown in Fig. 4-8.



| | Red | Yellow | Cyan |
|---|---|---|---|
| Gain | 220 ± 7% | 155 ± 10% | 220 ± 7% |
| Phase | 103 ± 5° | 167 ± 8° | 283 ± 7° |

**Fig 4-8**

- Press the Home/Set Button twice.
- Adjust rest of Chroma Gains and Chroma Phases on Table 4-9 with same procedure as above.

| Program Number | Test Point | Adjust |
|---|---|---|
| 034 | Recording Output Connector | VR4 |
| 035 | Recording Output Connector | VR6 |
| 036 | Recording Output Connector | VR8 |
| 037 | Multiscreen Output Connector | VR9 |
| 038 | Multiscreen Output Connector | VR12 |
| 039 | Multiscreen Output Connector | VR14 |
| 040 | Multiscreen Output Connector | VR16 |

**Table 4-9**

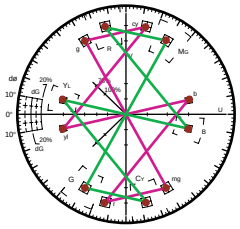
- Press the Home/Set Button twice.
- Change the connection of the terminated Oscilloscope with 75Ω to the Recording Output Connector on the Rear Panel.
- Execute Program Number **049** Press the Camera Selection Button/Preset Position Button **4**, **9** and **16** sequentially, the Menu as shown in Table 4-10 will be displayed.

SELF CHECK

049 Y PED($P_B$–YC) 00-3F 36

**Table 4-10**

- Adjust VR34 so that the Chroma Gain becomes maximum as shown in Fig. 4-9.
- Adjust VR23 so that the Chroma Vectors position their respective boxes as shown in Fig. 4-9.



| | Red | Yellow | Cyan |
|---|---|---|---|
| Gain | 220 ± 7% | 155 ± 10% | 220 ± 7% |
| Phase | 103 ± 5° | 167 ± 8° | 283 ± 7° |

**Fig 4-9**

- Press the Home/Set Button twice.

### (8). R-Y Gain and B-Y Gain Fine Adjustment

**Test Point: Recording Output Connector Rear Panel**
**Adjust: Left Button Pocket Board**
**Right Button Pocket Board**

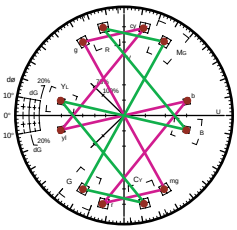
- Supply the Colour Bar signal to the Camera Input Connectors 1 on the Rear Panel.
- Execute Program Number **017** Press the Camera Selection Button/Preset Position Button **1**, **7** and **16** sequentially, the Menu as shown in Table 4-11 will be displayed.

SELF CHECK

017 R–Y GAIN(R-1A) 00-03 00

**Table 4-11**

- Change the connection of the Vectorscope to the Recording Output Connector on the Rear Panel.
- Adjust Direction Arrow Buttons **LEFT** and/or **RIGHT** so that the Chroma Vectors position their respective boxes as shown in Fig. 4-10.



| | Red | Yellow | Cyan |
|---|---|---|---|
| Gain | 220 ± 7% | 155 ± 10% | 220 ± 7% |
| Phase | 103 ± 5° | 167 ± 8° | 283 ± 7° |

**Fig 4-10**

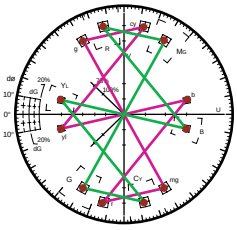
- Press the Home/Set Button twice.
- Adjust rest of R-Y and B-Y Gains by executing Program Numbers 025, 018, 026, 019, 027, 020 and 028 with same procedure as above.
- Press the Home/Set Button twice.
- Change the connection of the Vectorscope to the Multiscreen Output Connector on the Rear Panel.
- Execute Program Number **021** Press the Camera Selection Button/Preset Position Button **2**, **1** and **16** sequentially, the Menu as shown in Table 4-12 will be displayed.

SELF CHECK

021 R–Y GAIN(M-1A) 00-03 00

**Table 4-12**

- Adjust Direction Arrow Buttons **LEFT** and/or **RIGHT** so that the Chroma Vectors position their respective boxes as shown in Fig. 4-11.



| | Red | Yellow | Cyan |
|---|---|---|---|
| Gain | 220 ± 7% | 155 ± 10% | 220 ± 7% |
| Phase | 103 ± 5° | 167 ± 8° | 283 ± 7° |

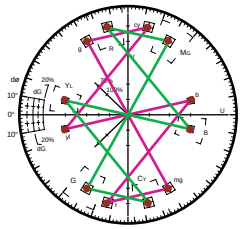
**Fig 4-11**

- Press the Home/Set Button twice.
- Adjust rest of R-Y and B-Y Gains by executing Program Numbers 029, 022, 030, 023, 031, 024 and 032 with same procedure as above.
- Change the connection of the Vectorscope to the Recording Output Connector on the Rear Panel.
- Execute Program Number **053** Press the Camera Selection Button/Preset Position Button **5**, **3** and **16** sequentially, the Menu as shown in Table 4-13 will be displayed.

| SELF CHECK |
|---|
| 053 R–Y GAIN($P_B$–YC) 00-03 00 |

**Table 4-13**

- Adjust Direction Arrow Buttons **LEFT** and/or **RIGHT** so that the Chroma Vectors position their respective boxes as shown in Fig. 4-12.



| | Red | Yellow | Cyan |
|---|---|---|---|
| Gain | 220 ± 7% | 155 ± 10% | 220 ± 7% |
| Phase | 103 ± 5° | 167 ± 8° | 283 ± 7° |

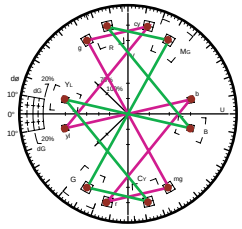
**Fig 4-12**

- Press the Home/Set Button twice.
- Execute Program Number **054** Press the Camera Selection Button/Preset Position Button **5**, **4** and **16** sequentially, the Menu as shown in Table 4-14 will be displayed.

| SELF CHECK |
|---|
| 054 B–Y GAIN($P_B$–YC) 00-03 00 |

**Table 4-14**

- Adjust Direction Arrow Buttons **LEFT** and/or **RIGHT** so that the Chroma Vectors position their respective boxes as shown in Fig. 4-13.



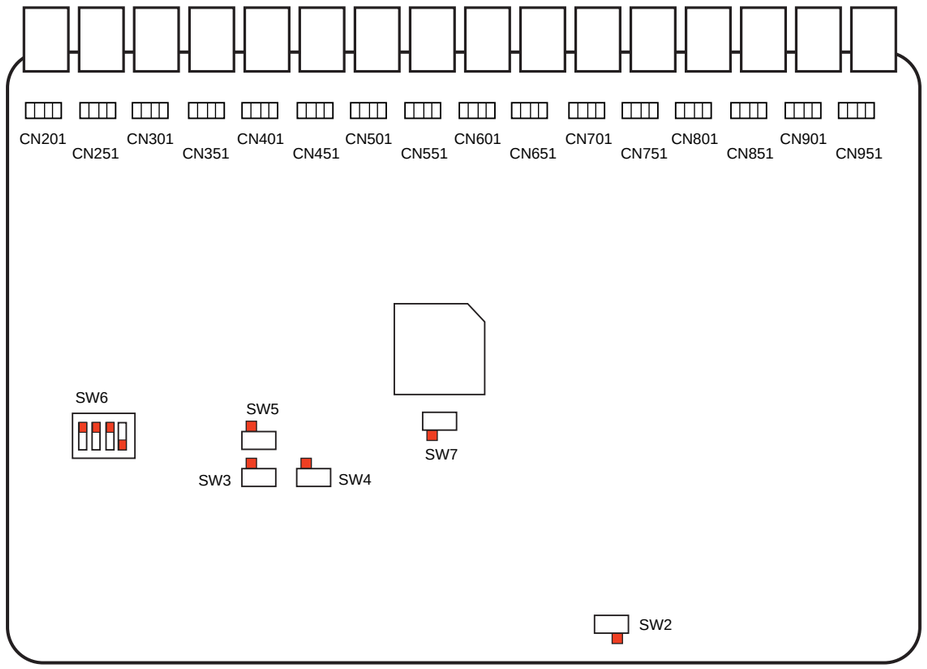
| | Red | Yellow | Cyan |
|---|---|---|---|
| Gain | 220 ± 7% | 155 ± 10% | 220 ± 7% |
| Phase | 103 ± 5° | 167 ± 8° | 283 ± 7° |

**Fig 4-13**

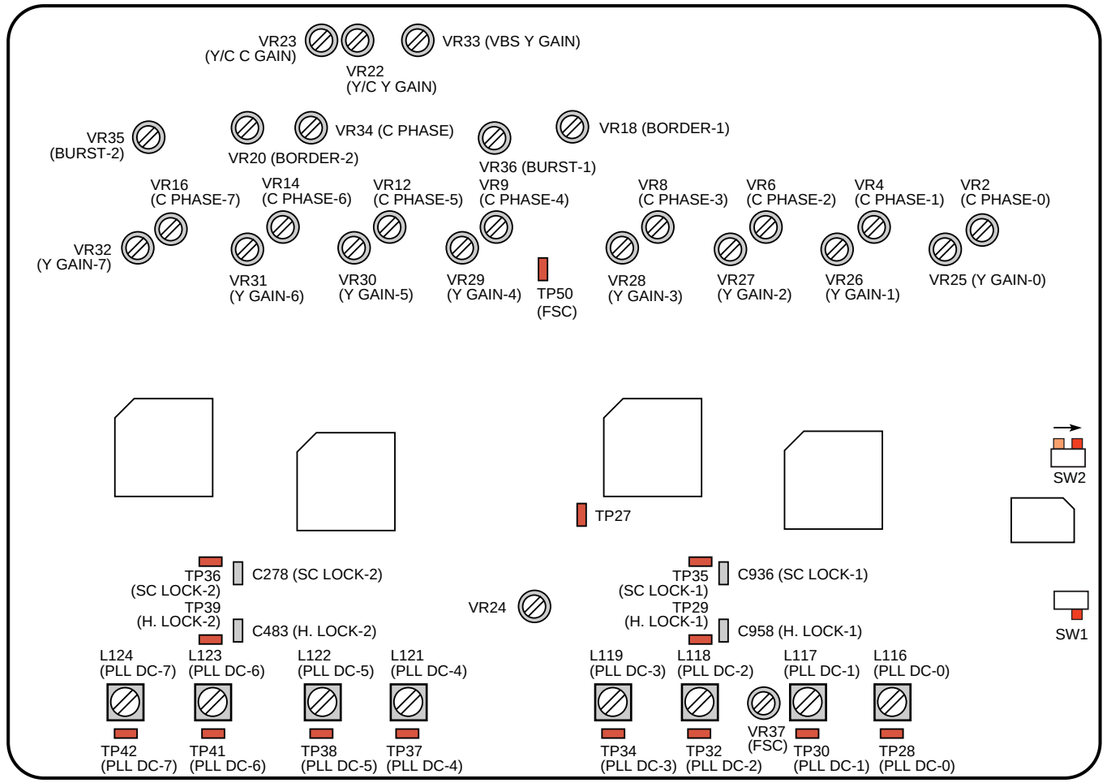
- Press the Home/Set Button twice.

# LOCATION OF TEST POINTS AND ADJUSTING CONTROLS

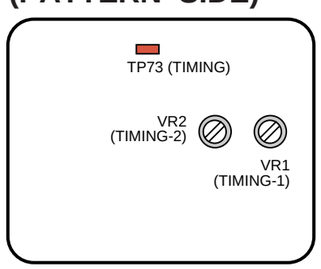
## MAIN BOARD (COMPONENT SIDE)




## SWITCH BOARD (COMPONENT SIDE)

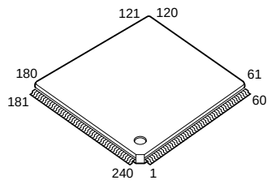



## SWITCH SUB BOARD (PATTERN SIDE)



# APPEARANCE OF IC, TRANSISTOR AND DIODE

YWNOKZ

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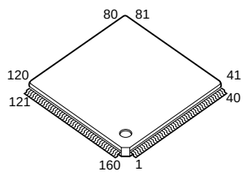


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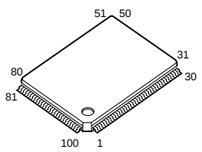


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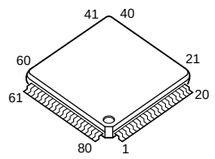


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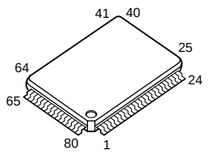


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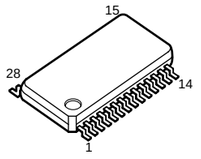


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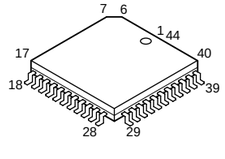


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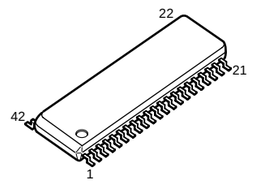


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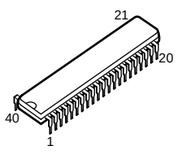


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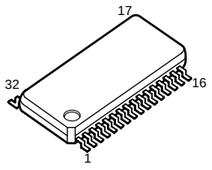


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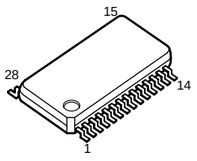


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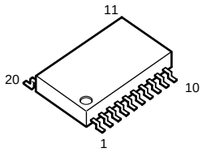


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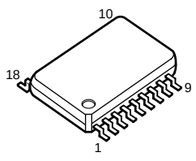


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MC74HC138AF
MC74HC157ADT
MC74HC161AF
MC74HC4020F

MC74HC4051DT
MC74HC4051F
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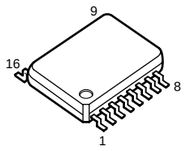


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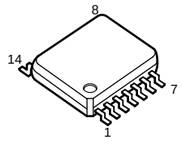
YWMC74HC08DT

MC74HC32ADT
MC74HC74ADT

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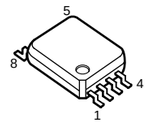


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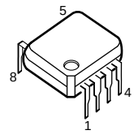


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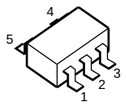


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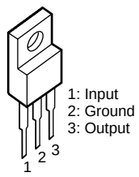


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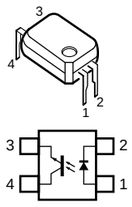


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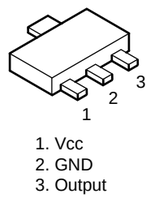


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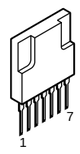


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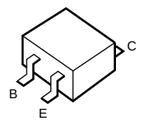


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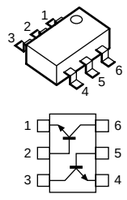


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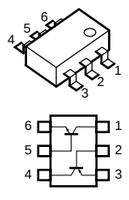


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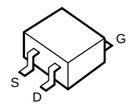


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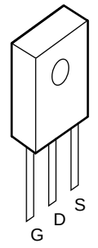
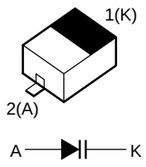
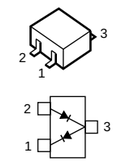


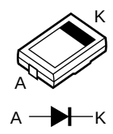

MA372




MA153




YWSC2012

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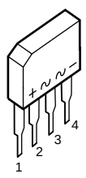


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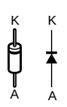


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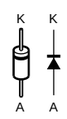


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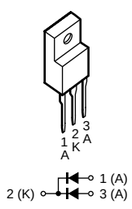


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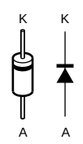


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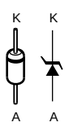


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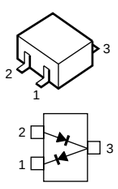


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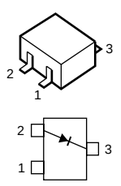


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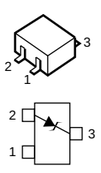
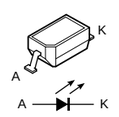
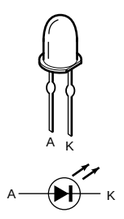


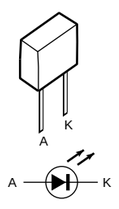

LN1261C




LN29RD
LN49YP



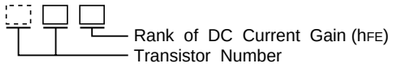

LN242RP



# CHIP COMPONENTS

## 1. Chip Transistor

The transistor number is indicated on the top surface of the chip transistor using two alphabet letters or one numerical number and two alphabet letters.




**Transistor Number**

(Chip Transistor)

| Letter | Transistor No. | Letter | Transistor No. |
|---|---|---|---|
| A | 2SB709 | X | 2SD602A |
| B | 2SB709A | Y | 2SD601 |
| C | 2SB710 | Z | 2SD601A |
| D | 2SB710A | 1A | 2SB799 |
| E | 2SA1022 | 1B | 2SB814 |
| F | 2SA1034 | 1C | 2SB902 |
| H | 2SA1035 | 1F | 2SK321 |
| I | 2SB792 | 1K | 2SK316 |
| K | 2SC2778 | 1L | 2SK247 |
| P | 2SD814 | 1M | 2SJ84 |
| Q | 2SD813 | 1N | 2SK199 |
| R | 2SC2480 | 1O | 2SK198 |
| S | 2SC2405 | 1T | 2SC3077 |
| T | 2SC2406 | 1X | 2SC2845 |
| U | 2SC2404 | 1Z | 2SD1030 |
| V | 2SC2295 | 2B | 2SK374 |
| W | 2SD602 | 2C | 2SK116 |
| BQ | 2SB766A | UMT | 2SC4081 |

(Small Chip Transistor)

| Letter | Transistor No. |
|---|---|
| A | 2SB1218 |
| B | 2SB1218A |
| D | 2SB1219A |
| U | 2SC3931 |
| W | 2SD1820 |
| X | 2SD1820A |
| Y | 2SD1819 |
| E3 | 2SA1226 |
| OS | 2SB1219 |
| UC | 2SA1532 |
| YU | 2SC3938 |

(Pair Transistor)

| Letter | Transistor No. | Letter | Transistor No. |
|---|---|---|---|
| 5R | XN1501 | 5H | XP4501 |
| 7S | XN1601 | 5C | XP4601 |
| 5H | XN4501 | 5H | XP4501 |
| 5C | XN4601 | 5L | XP5501 |
| 5L | XN5501 | 4N | XP5601 |
| 4N | XN5601 | 7S | XP6501 |
| 5N | XN6501 | 7W | XP6435 |
| 7W | XN6435 | 7F | XP6534 |
| 7F | XN6534 | X1 | UMX1 |
| 5R | XP1501 | Z1 | UMZ1 |
| 7S | XP1601 | | |

**Example:**

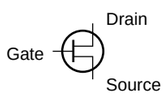
WQ → 2SD602-Q
YQ → 2SD601-Q
1BS → 2SB814-S

**Appearance and Symbols**

**Transistor**

C: Collector
B: Base
E: Emitter

**FET**




| | 1 | 2 | 3 |
|---|---|---|---|
| Eacept 2SK199 | Drain | Source | Gate |
| 2SK199 | Gate | Drain | Source |

## 2. Chip Diode

The diode number is indicated on the top surface of the chip diode using two alphabet letters.

**Diode Number**

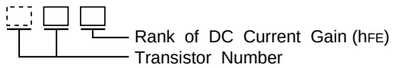
| Letter | Diode No. | Letter | Diode No. |
|---|---|---|---|
| MA | MA151A | MI | MA152K |
| MB | MA152A | MK | MA28W-B |
| MC | MA153 | ML | MA28T-A |
| MD | MA28-A | MN | MA151WA |
| ME | MA28-B | MO | MA152WA |
| MF | MA28W-A | MT | MA151WK |
| MH | MA151K | MU | MA152WK |
| MH | MA141K | 6.2 | MA3062 |
| MC | MA143 | SMD | RD421D |

**Appearance and Symbols**

| | 1 | 2 | 3 |
|---|---|---|---|
| MA28/MA28W/MA28T | – | Anode | Cathode |
| MA151K/MA152K | – | Anode | Cathode |
| MA151A/MA152A | – | Cathode | Anode |
| MA151WK/MA152WK | Anode | Anode | Cathode |
| MA151WA/MA152WA | Cathode | Cathode | Anode |
| MA153 | Cathode | Anode | Common |
| MA141K | – | Anode | Cathode |
| MA143 | Anode | Cathode | Common |
| MA3062 | Anode | – | Cathode |
| RD421D | Anode | – | Cathode |

## 3. Chip Resistor

The resistor value is indicated on the bottom surface of the chip resistor using three digit numbers.




**Example:**

330 → $33 \times 10^0 = 33\ \Omega$
561 → $56 \times 10^1 = 560\ \Omega$
123 → $12 \times 10^3 = 12\ k\Omega$

**Note:** Zero ohm resistor (jumper chip) is colored red or green.

## 4. Chip Capacitor

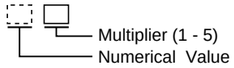
The capacitive value of replacement chip capacitors is indicated on the bottom surface. Original parts have no value indication.

If the capacitive value is less than 100 pF, the value will be indicated by one or two digit number expressing the capacity directly in pF.

**Example:**

0.5 → 0.5 pF  2.5 → 2.5 pF
.75 → 0.75 pF  33 → 33 pF
1 → 1 pF  82 → 82 pF

If the capacitive value is 100 pF or greater, the value will be indicated by an alpha-numeric code. The letter precedes the number and expresses a numerical value to be multiplied by the number which follows.




**Numerical Value**

| Letter | Value | Letter | Value |
|---|---|---|---|
| A | 10 | N | 33 |
| B | 11 | P | 36 |
| C | 12 | Q | 39 |
| D | 13 | R | 43 |
| E | 15 | S | 47 |
| F | 16 | T | 51 |
| G | 18 | U | 56 |
| H | 20 | V | 62 |
| J | 22 | W | 68 |
| K | 24 | X | 75 |
| L | 27 | Y | 82 |
| M | 30 | Z | 91 |

* Letters I and O are not used.

Example: A1 → $10 \times 10^1 = 100$ pF
N2 → $33 \times 10^2 = 3300$ pF
S3 → $47 \times 10^3 = 47000$ pF

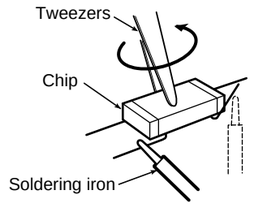
## 5. Precautions in replacing the chip component

1. Make sure that the unit is turned OFF when replacing the chip.
2. Use tweezers to prevent any damage to the chip surface.
3. Do not re-use the chips after removal.
4. Do not rub the electrode of chips.
5. Do not subject the chips to excessive stress.
6. It is recommended that a pencil-type soldering iron to be used.
7. The solder whose diameter is less than 0.5 mm is recommended.
8. Do not heat the chip more than 3 seconds.
9. Maintain temperature control under 260°C (500°F) when soldering.

### 5-1. Removal (Transistor, Diode, Resistor and Capacitor)

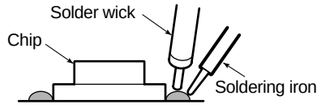
1. Add the solder to both ends of the chip (three leads for chip transistor).
2. While attaching the soldering iron to both ends of the chip (three leads for chip transistor) as shown below, remove the chip by turning with tweezers.

**Note:** Be careful not to damage other chips.

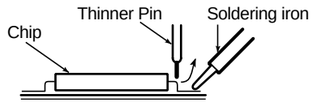



### 5-2. Removal (IC)

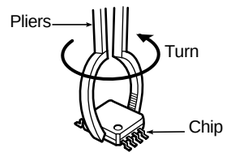
1. Add the solder wick and soldering iron to each lead of the IC and remove solder.




2. Add the soldering iron to each lead of the IC and left each lead of the IC using thinner pin.

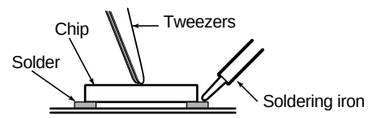



3. Remove the IC turning with pliers.

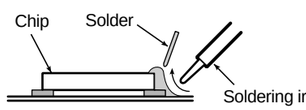



### 5-3. Mounting

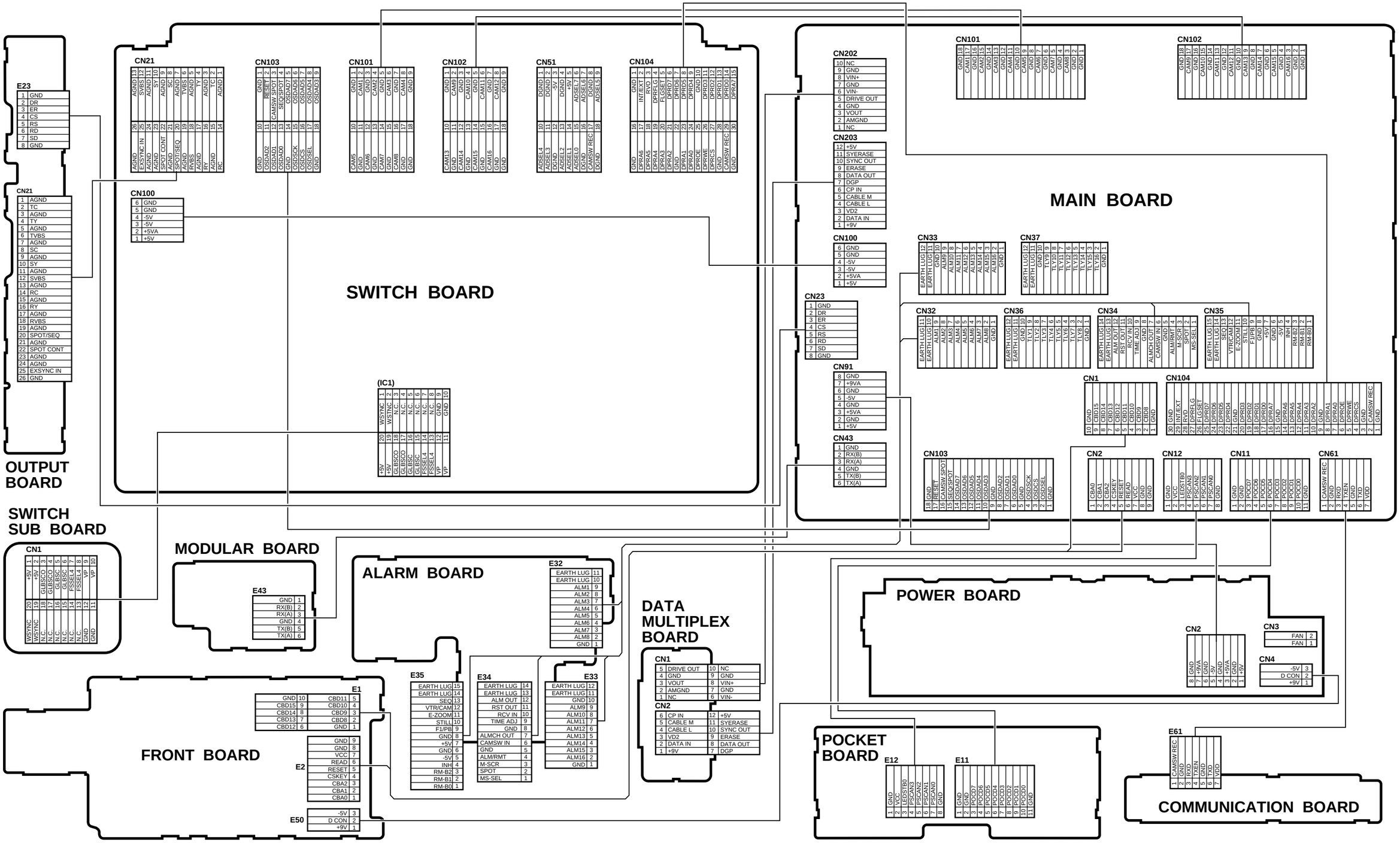
1. Place the solder thinly on the chip mounting foil.
2. Solder the chip temporarily while holding the chip with the tweezers.



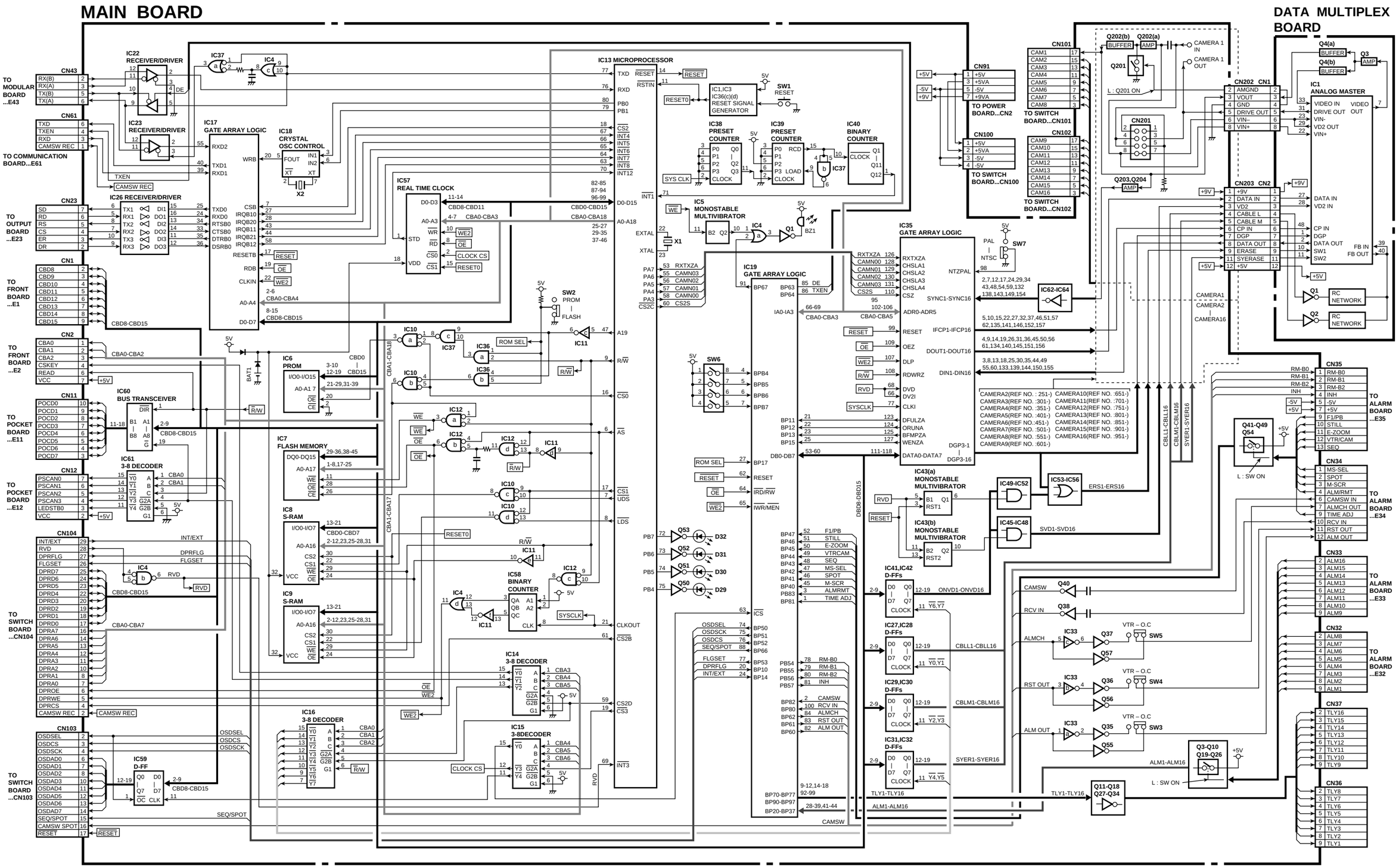

3. Solder both ends of the chip (three leads for chip transistor).



# WIRING DIAGRAM

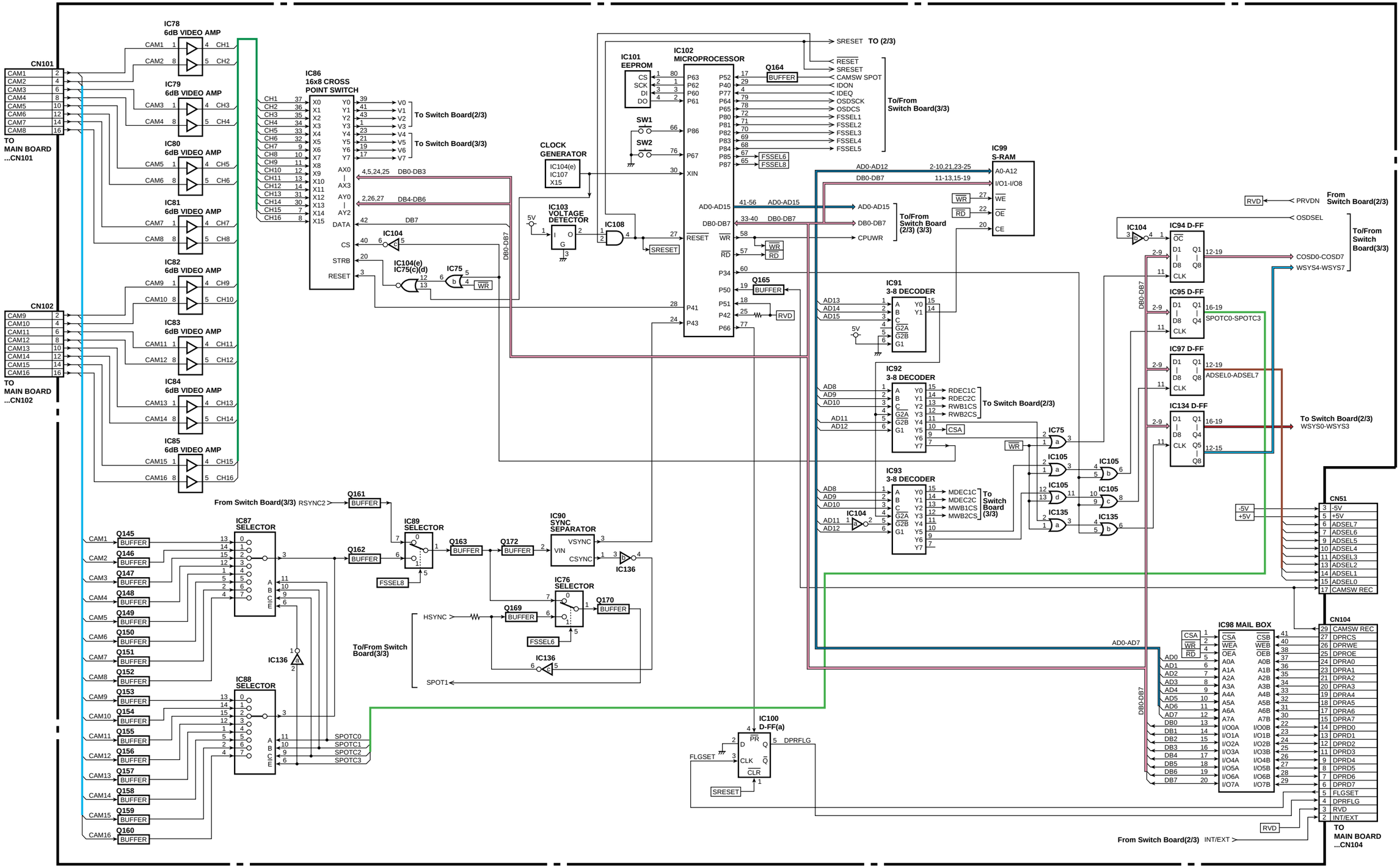


# BLOCK DIAGRAM OF MAIN BOARD



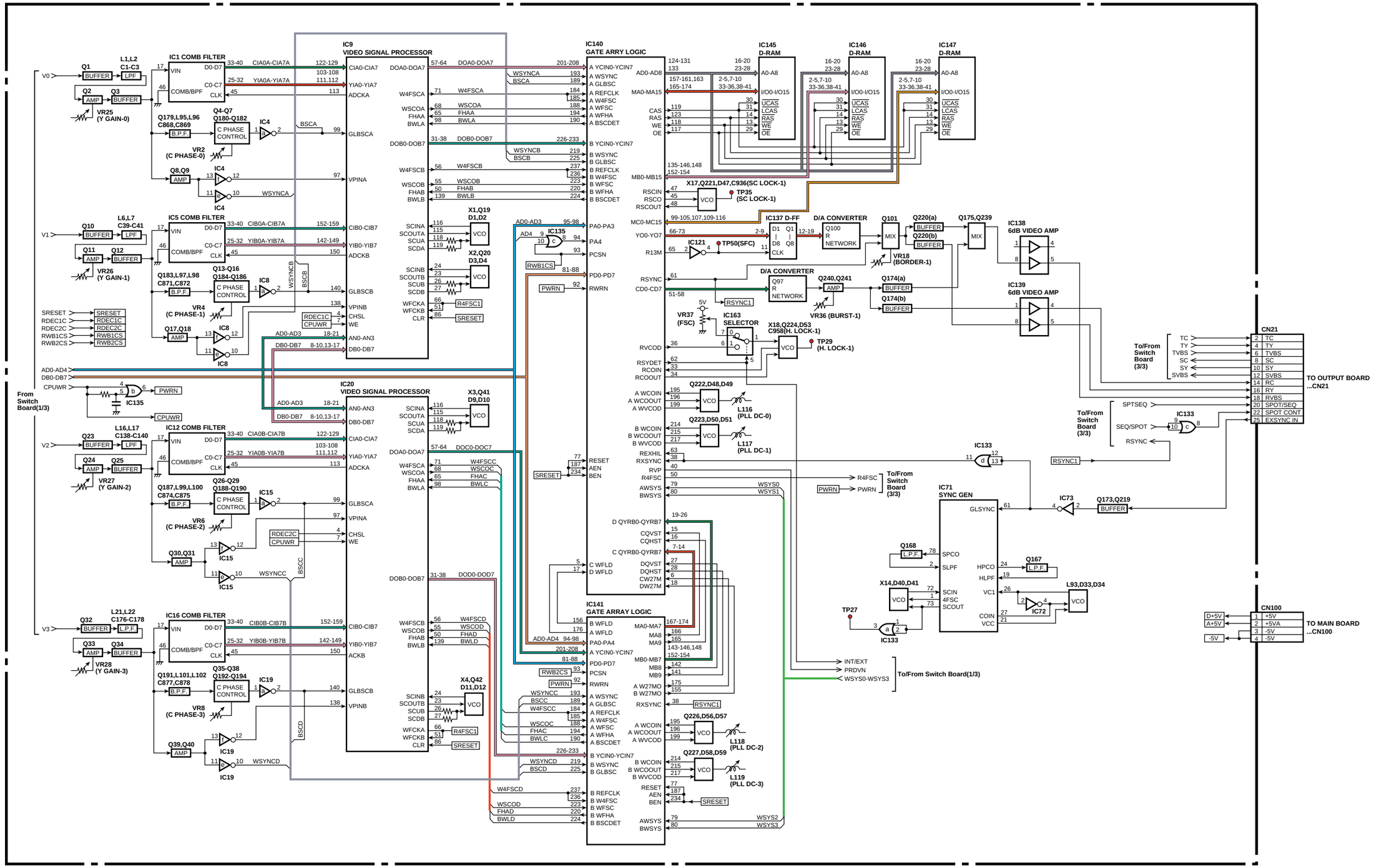
# BLOCK DIAGRAM OF SWITCH BOARD (1/3)

## SWITCH BOARD (1/3)



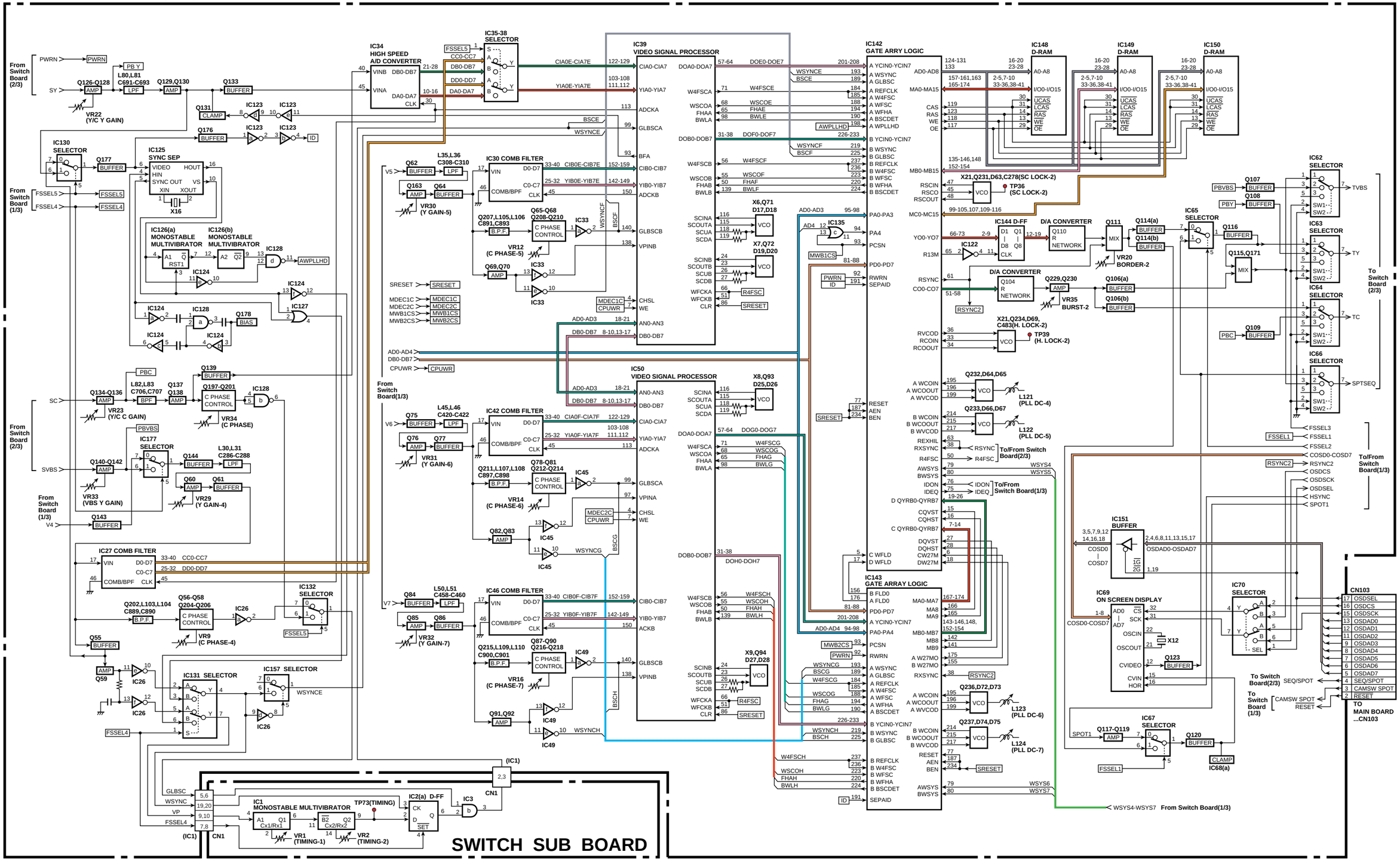
# BLOCK DIAGRAM OF SWITCH BOARD (2/3)

## SWITCH BOARD (2/3)



# BLOCK DIAGRAM OF SWITCH BOARD (3/3)

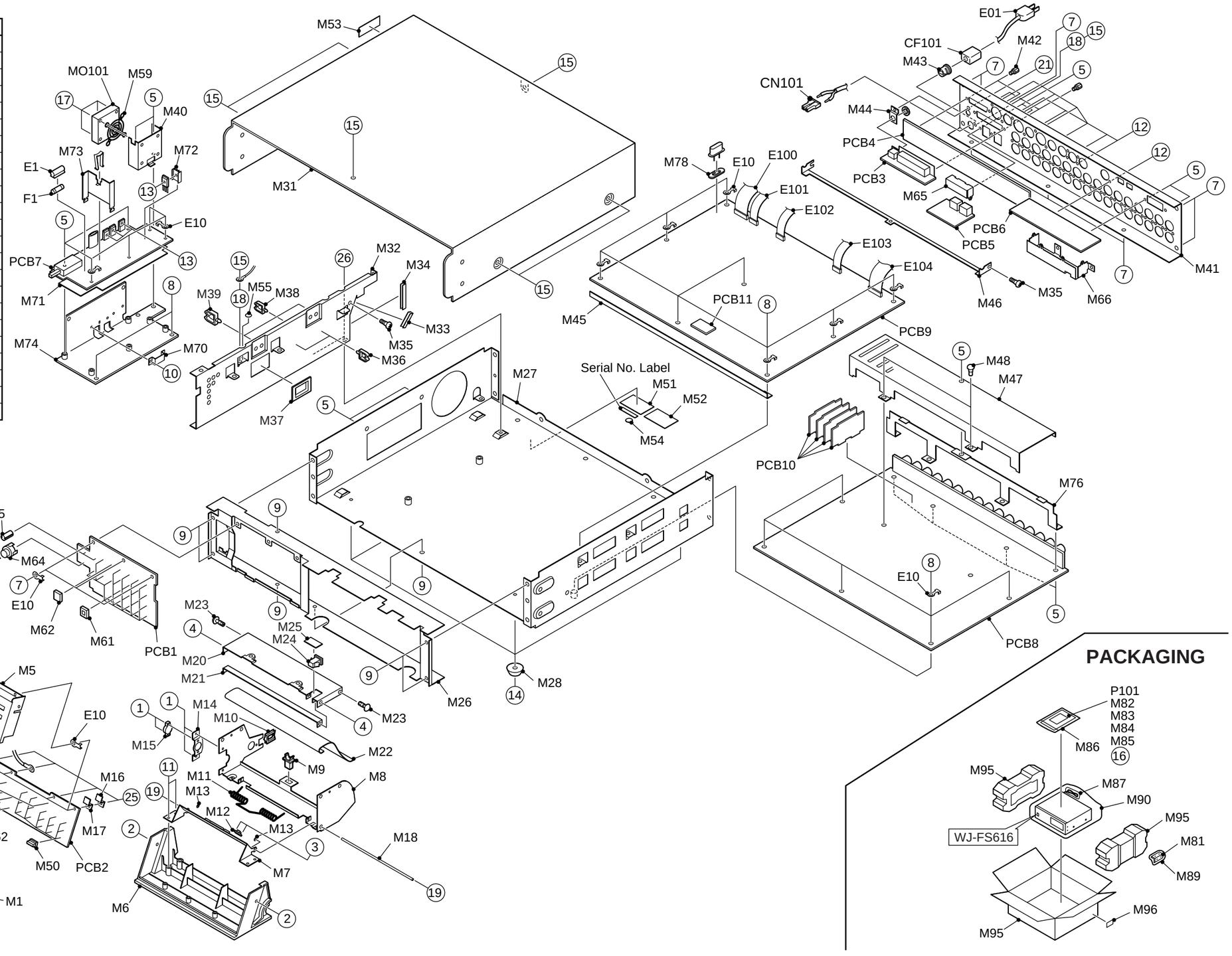
## SWITCH BOARD (3/3)



# EXPLODED VIEW

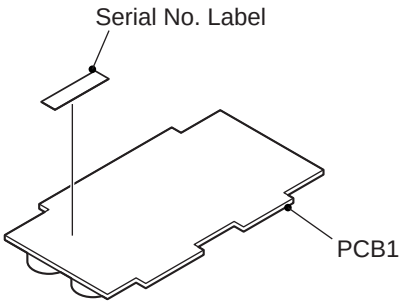
◯Numbers show screws, washers, nuts and etc.

| No. | Screws | Description |
|---|---|---|
| ① | XYN2+C5FX | Pan Head Screw and Washer Assy |
| ② | XSB26+4FX | Binding Head Screws |
| ③ | XSS26+4FX | Flush Head Screws |
| ④ | XSB3+4FX | Binding Head Screws |
| ⑤ | XSB3+6FN | Binding Head Screws |
| ⑥ | XSS3+6FN | Flush Head Screws |
| ⑦ | YWA1AA0270A4 | Binding Head Screws |
| ⑧ | YWA1AB0272A4 | Binding Head Screws |
| ⑨ | YWA1AA0272A4 | Binding Head Screws |
| ⑩ | XYN3+J6FX | Pan Head Screw and Washer Assy |
| ⑪ | XTN3+8CFN | Pan Head Tapping Screws |
| ⑫ | XTN3+10CFN | Pan Head Tapping Screws |
| ⑬ | XYN3+J10FX | Pan Head Screw and Washer Assy |
| ⑭ | XTB3+12FFX | Binding Head Tapping Screws |
| ⑮ | XSB4+6FN | Binding Head Screws |
| ⑯ | XSB4+10FN | Binding Head Screws |
| ⑰ | XSB4+35FX | Binding Head Screws |
| ⑱ | XWC4BFN | Internal Toothed Lock Washers |
| ⑲ | XUC2VW | Retaining Rings "Type E" |
| ⑳ | XSB2+6FX | Binding Head Screw |
| ㉑ | XSB4+8FN | Binding Head Screw |
| ㉒ | XSB3+8FN | Binding Head Screws |
| ㉓ | XTB3+5FFX | Binding Head Tapping Screw |

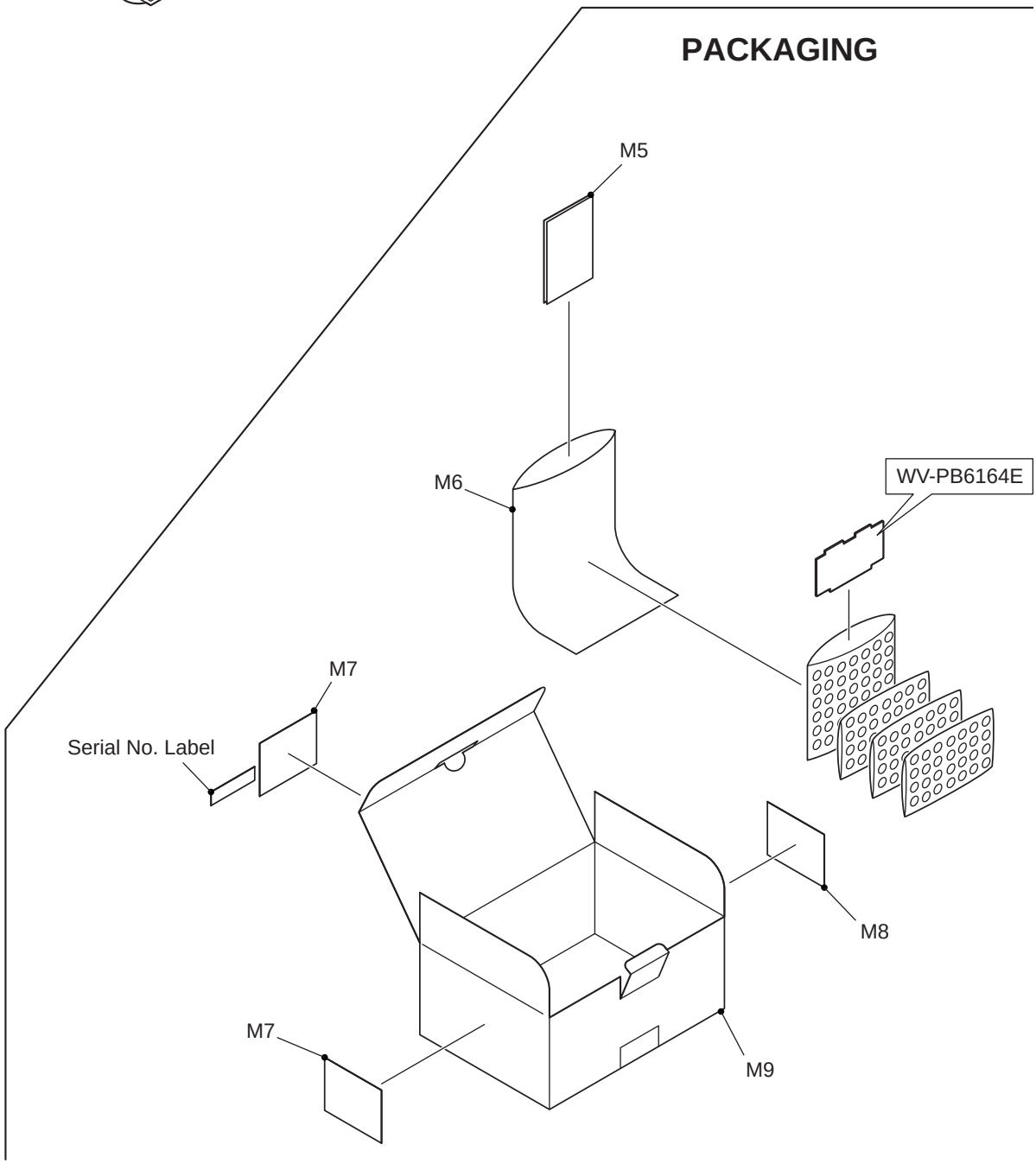



## PACKAGING

# EXPLODED VIEW OF WV-PB6164E




## PACKAGING



Printed in Japan
C-661 Ⓝ 5, 7, 23

ORDER NO. AVS9909191S8

# Service Manual

Video Multiplexer

# WJ-FS616

Please file and use this supplement service manual together with the service manual for Model No. WJ-FS616 Order No. AVS9801086C8.

## ■ Switch-Sub Board

Switch-Sub Board has been deleted and its circuit has been included into the Switch Board to improve productivity.

Panasonic

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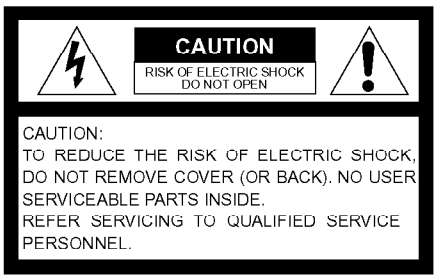
## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.




This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.

## IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "⚠" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-radiation, shock, fire, or other hazards. Do not modify the original design without permission of manufacture.

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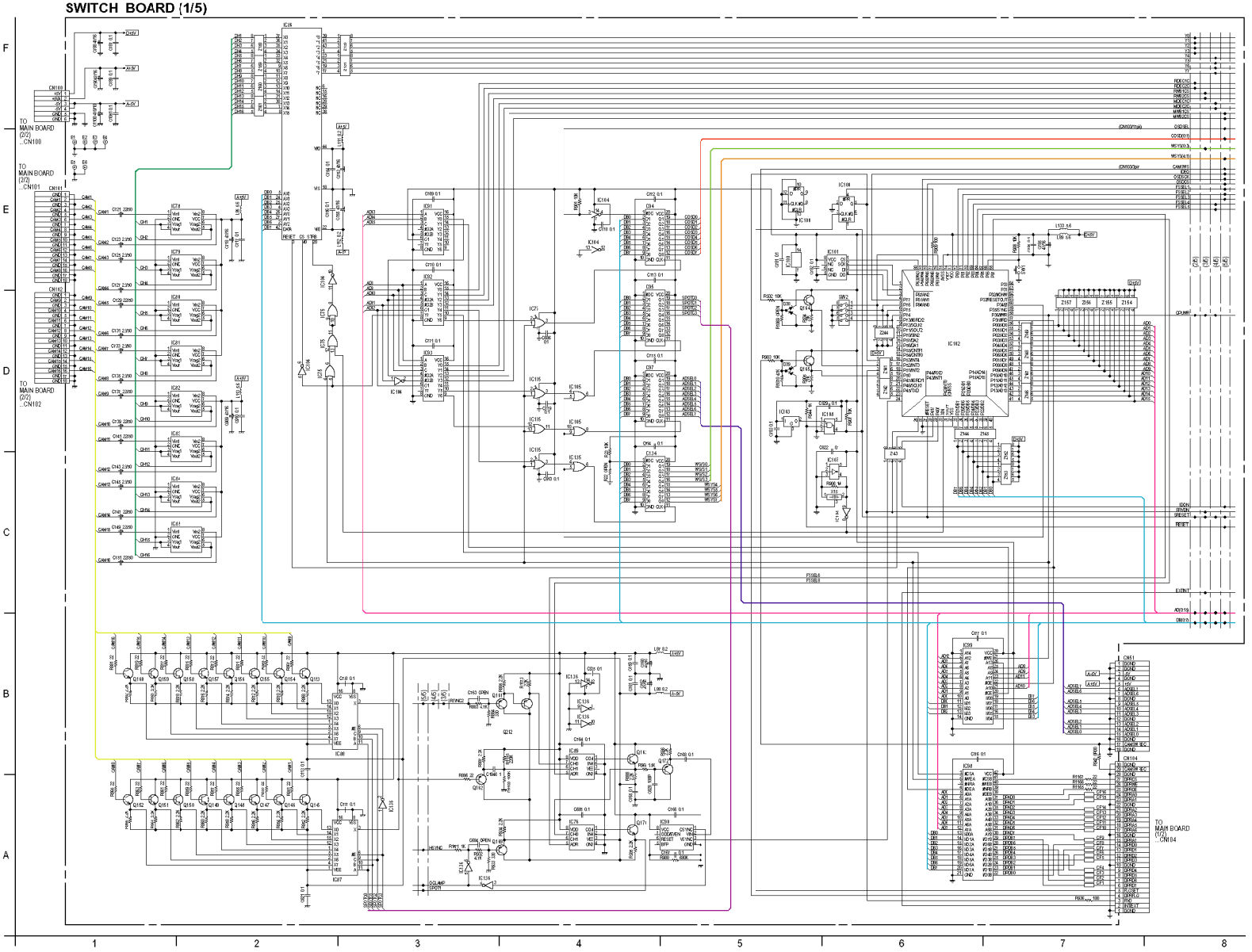


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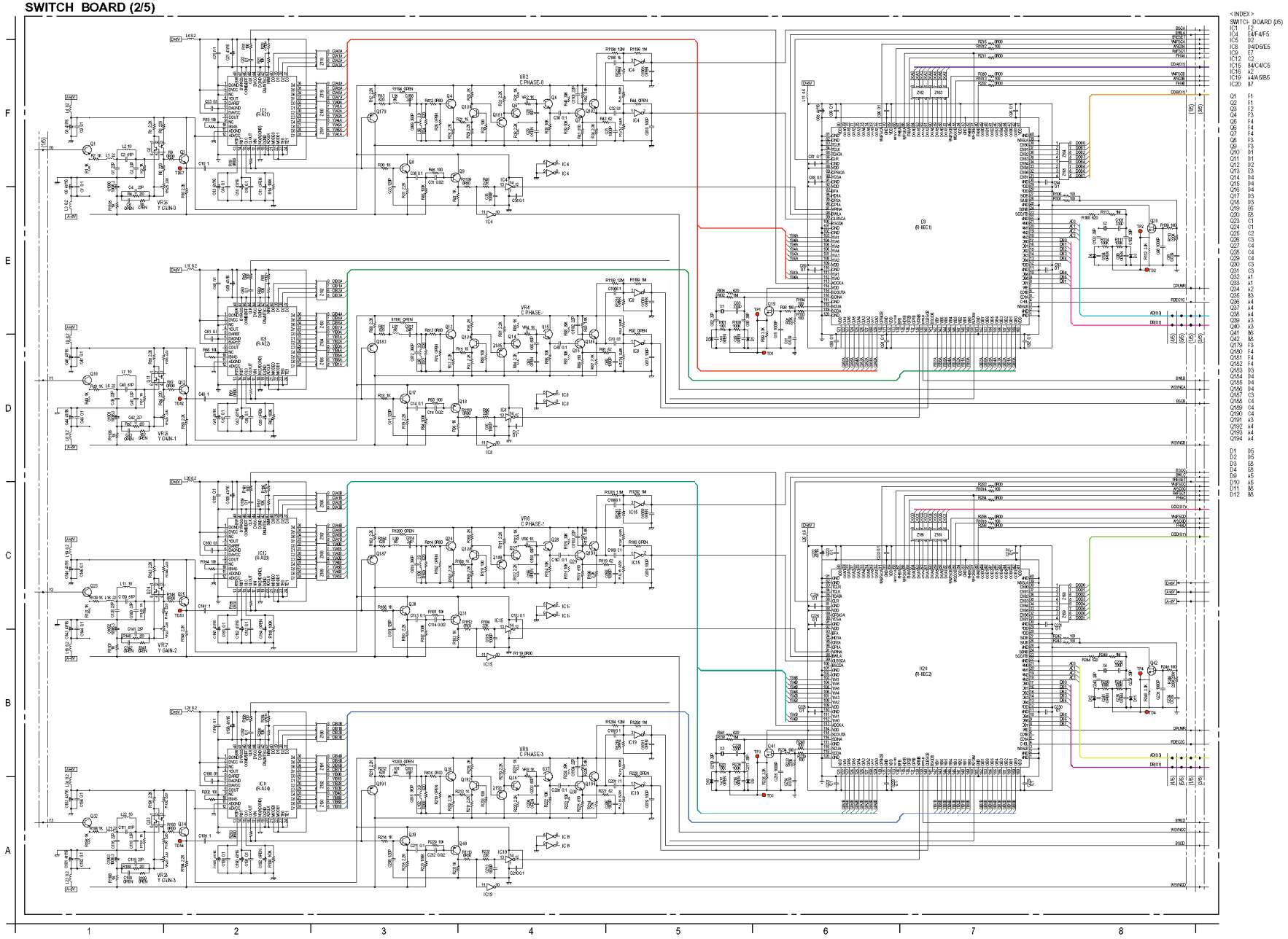


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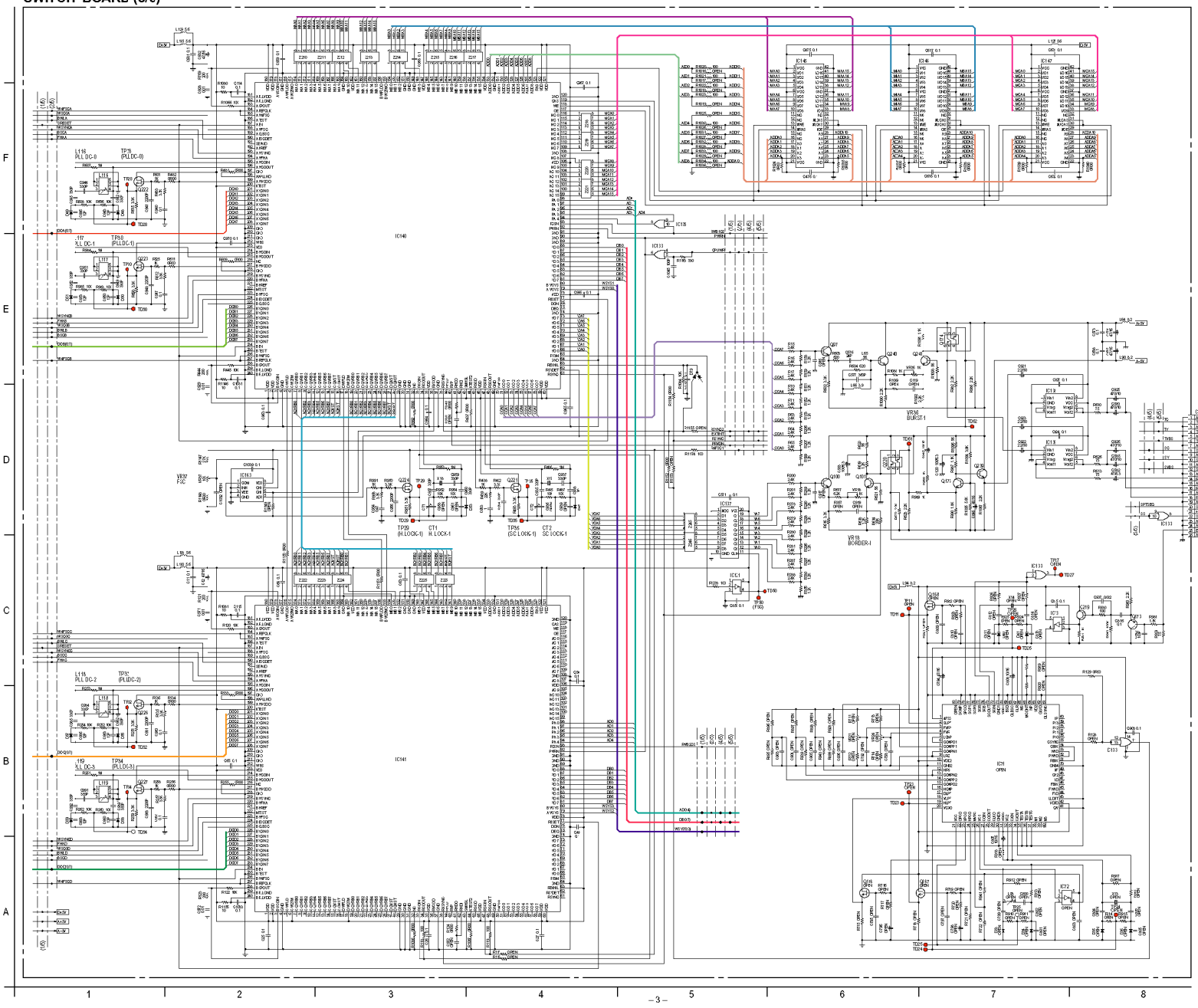
## SWITCH BOARD (3/5)

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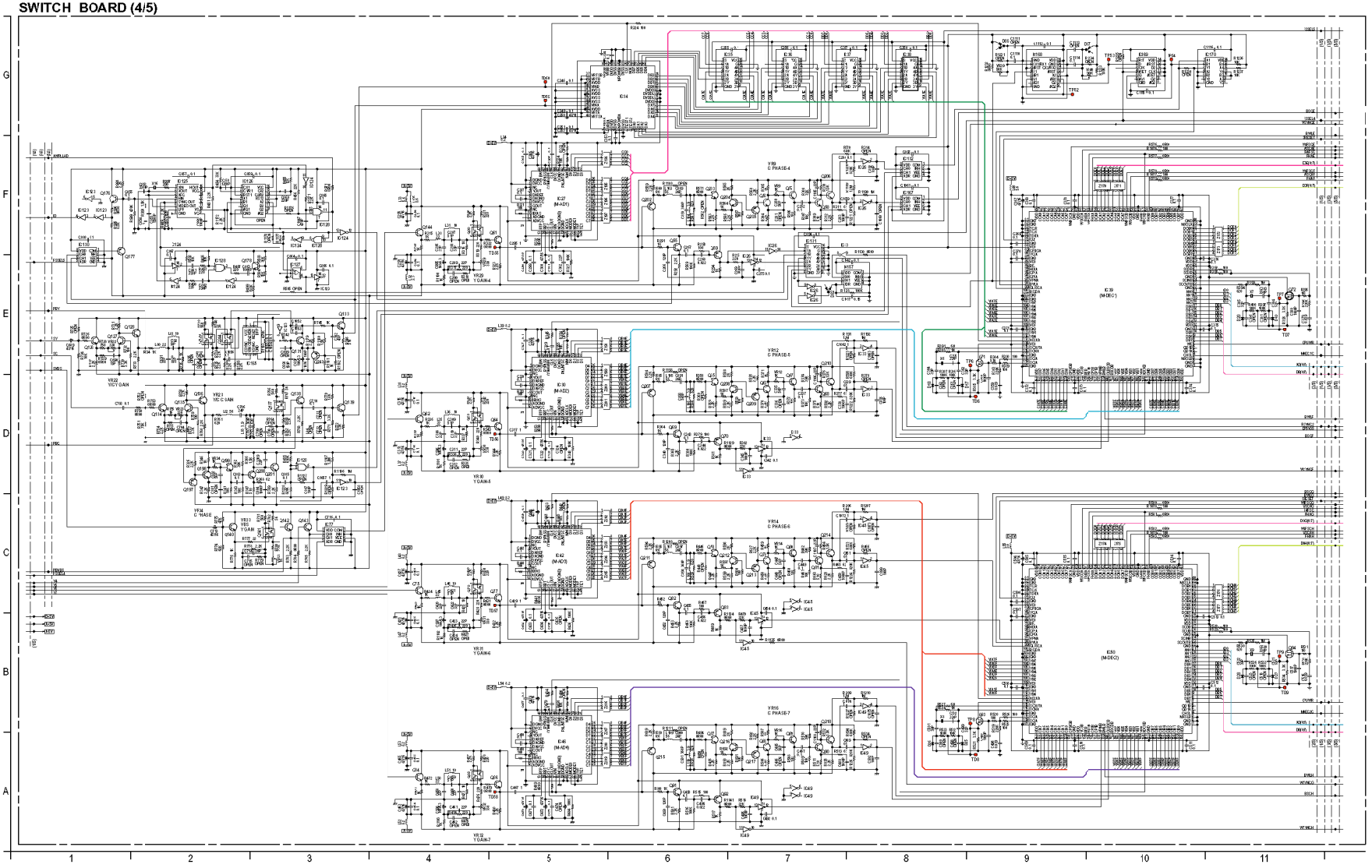

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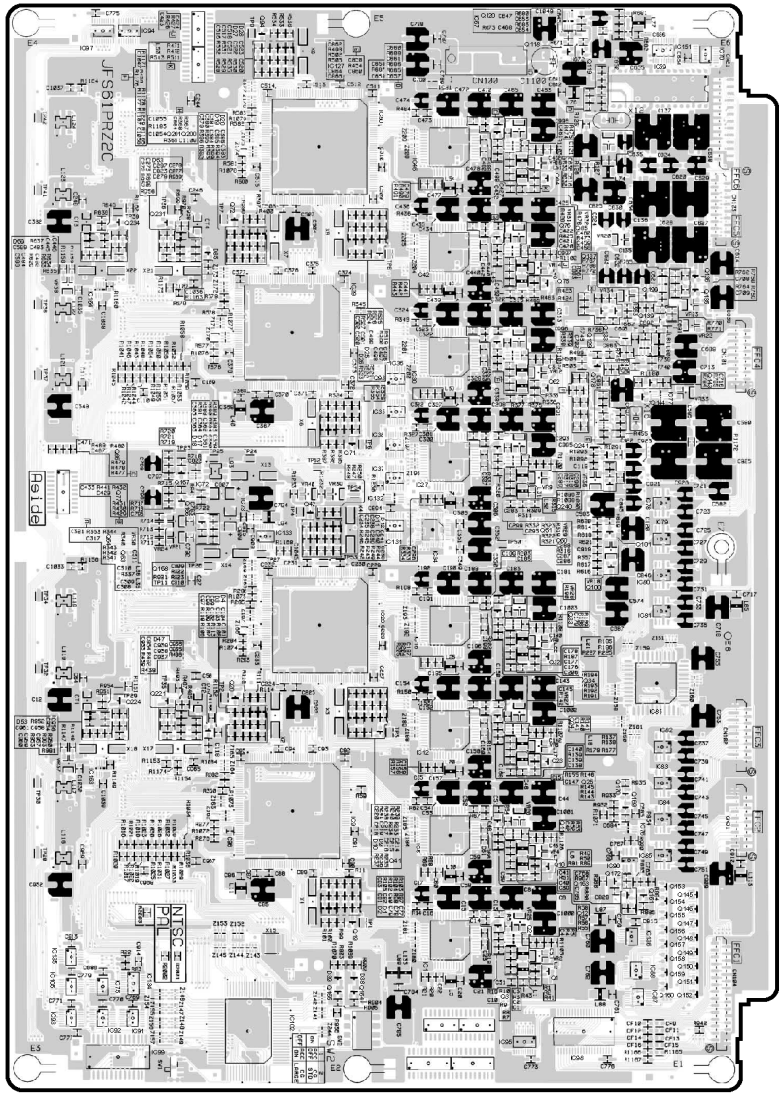
# CONDUCTOR VIEW OF SWITCH BOARD

SWITCH BOARD

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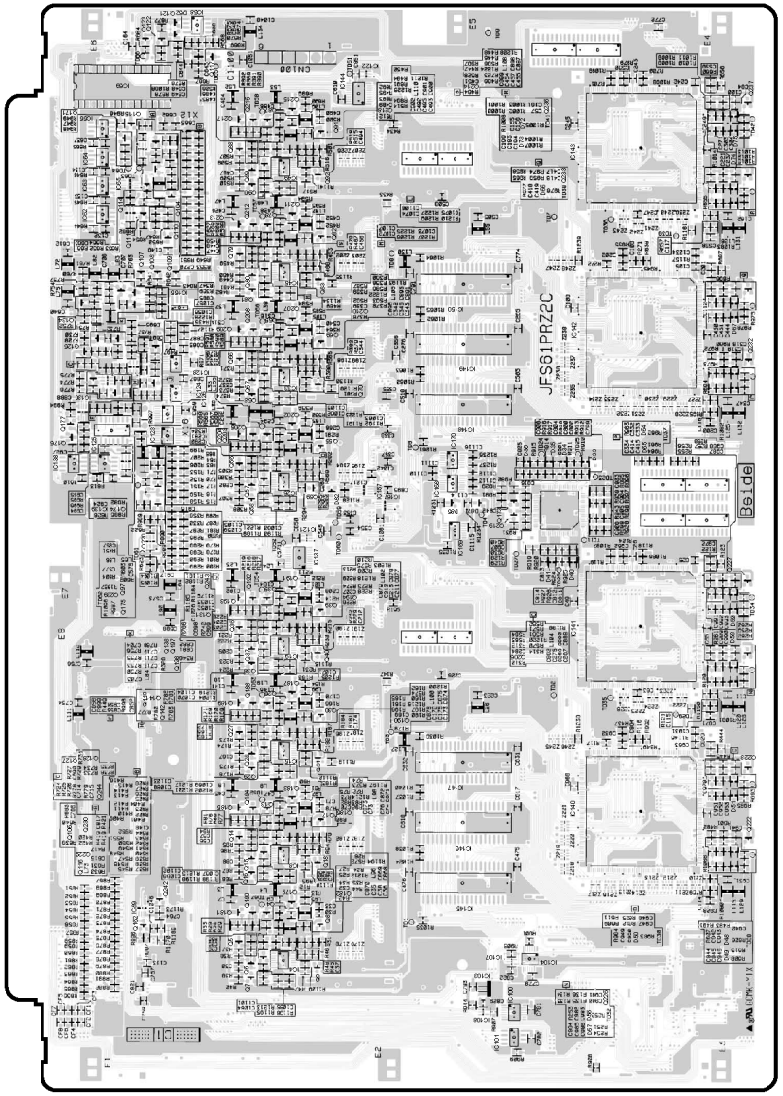


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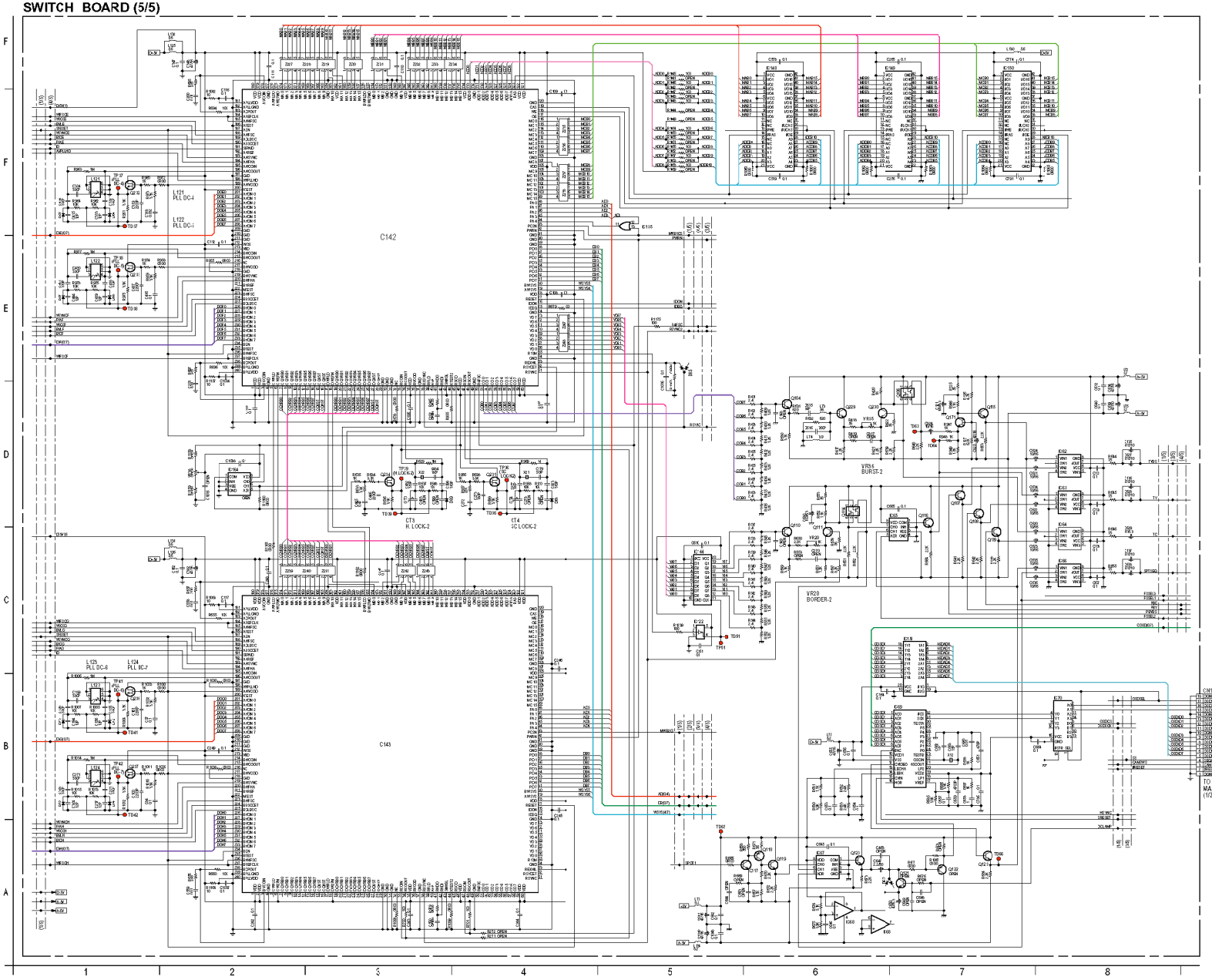
# SCHEMATIC DIAGRAM OF SWITCH BOARD (5/5)

## SWITCH BOARD (5/5)

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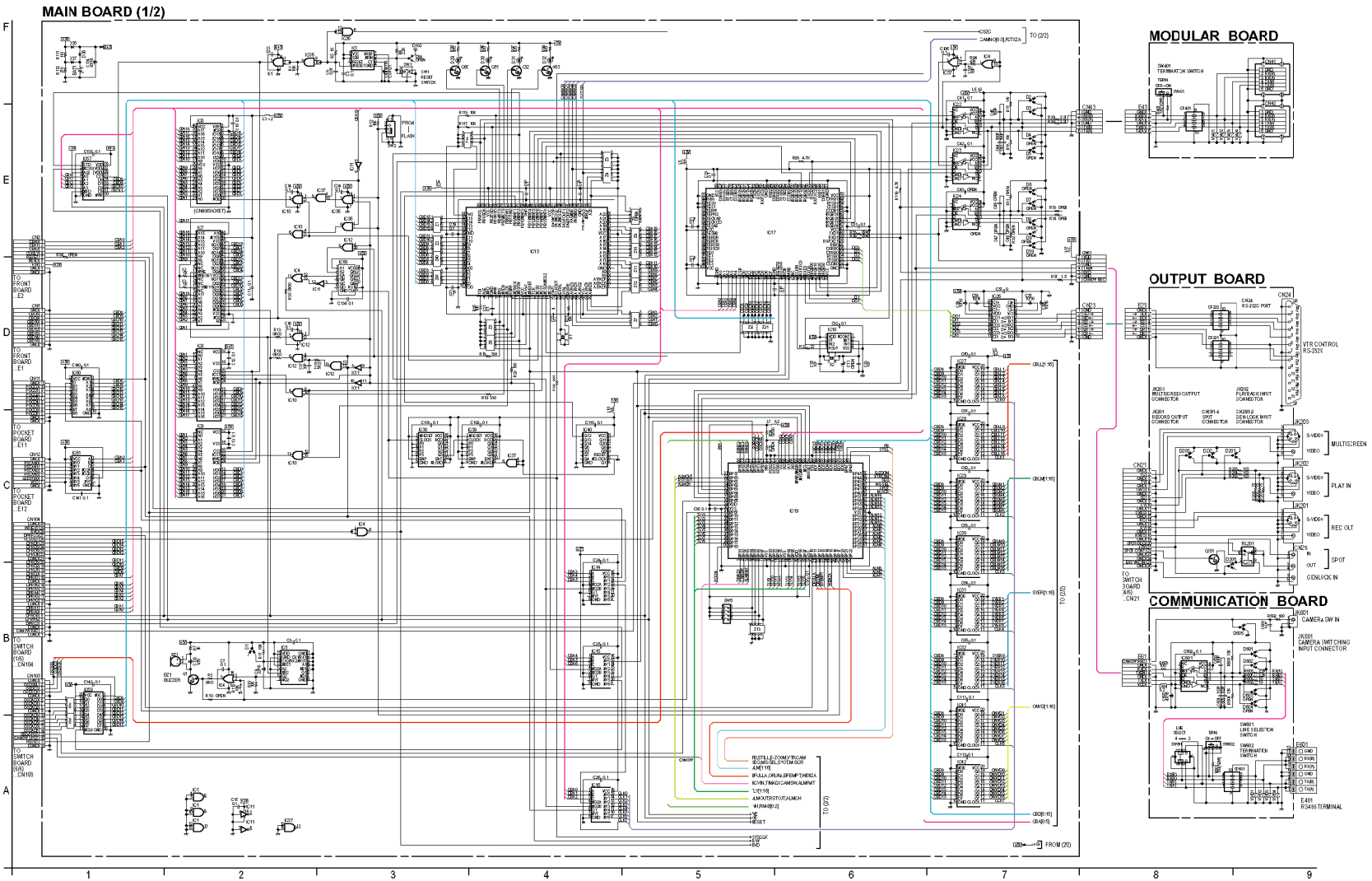
# SCHEMATIC DIAGRAM OF MAIN BOARD (1/2) / MODULAR BOARD / OUTPUT BOARD / COMMUNICATION BOARD

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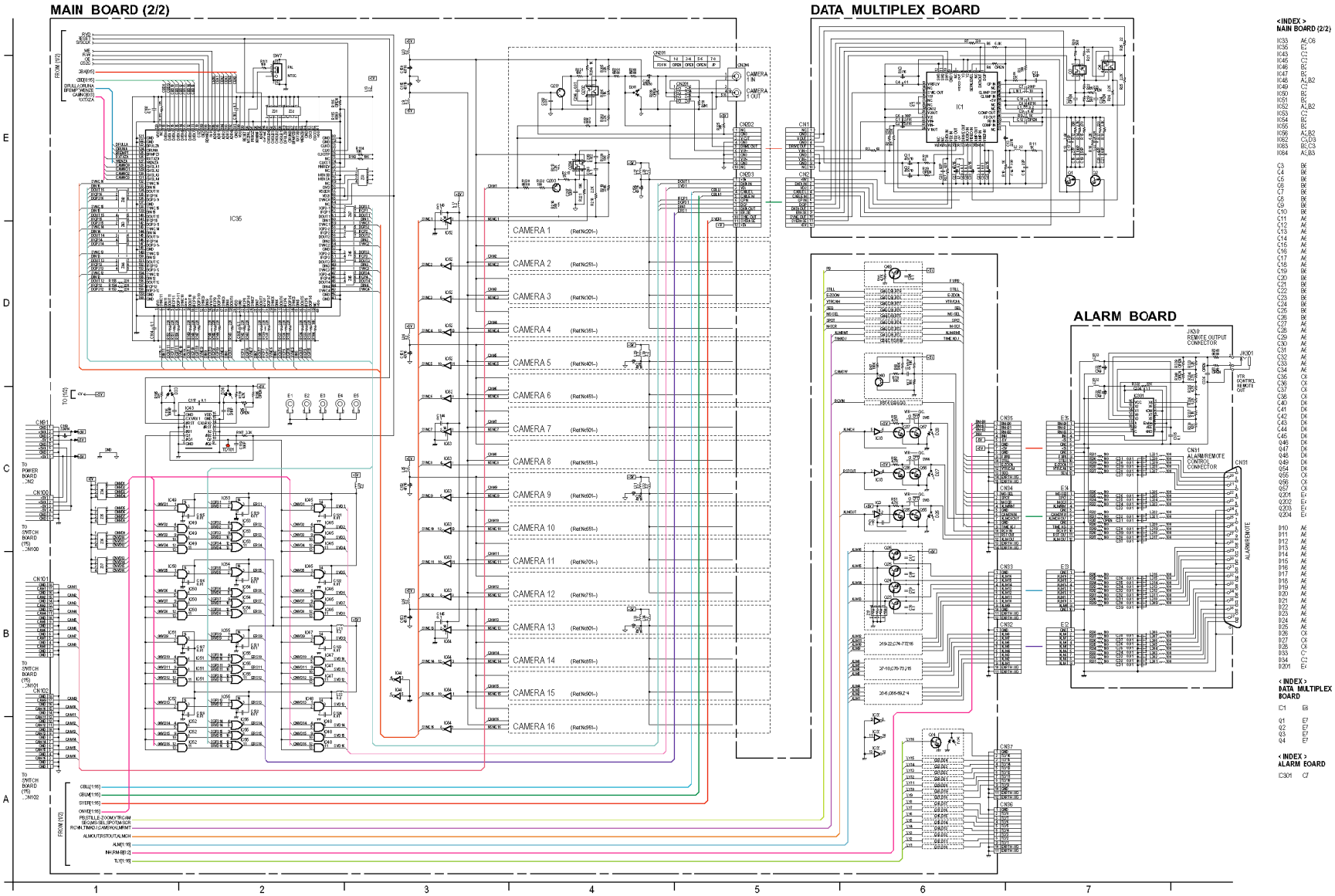


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| IC51 | B2 |
| IC52 | A2,B2 |
| IC53 | C2 |
| IC54 | B2 |
| IC55 | B2 |
| IC56 | A2,B2 |
| IC62 | C2,D3 |
| IC63 | B2,C3 |
| IC64 | A2,B3 |
| C3 | B6 |
| C4 | B6 |
| C5 | B6 |
| C6 | B6 |
| C7 | B6 |
| C8 | B6 |
| C9 | B6 |
| C10 | B6 |
| C11 | A6 |
| C12 | A6 |
| C13 | A6 |
| C14 | A6 |
| C15 | A6 |
| C16 | A6 |
| C17 | A6 |
| C18 | A6 |
| C19 | B6 |
| C20 | B6 |
| C21 | B6 |
| C22 | B6 |
| C23 | B6 |
| C24 | B6 |
| C25 | B6 |
| C26 | B6 |
| C27 | A6 |
| C28 | A6 |
| C29 | A6 |
| C30 | A6 |
| C31 | A6 |
| C32 | A6 |
| C33 | A6 |
| C34 | A6 |
| C35 | C6 |
| C36 | C6 |
| C37 | C6 |
| C39 | C6 |
| C40 | D6 |
| C41 | D6 |
| C42 | D6 |
| C43 | D6 |
| C44 | D6 |
| C45 | D6 |
| C46 | D6 |
| C47 | D6 |
| C48 | D6 |
| C49 | D6 |
| C54 | D6 |
| C55 | C6 |
| C56 | C6 |
| C57 | C6 |
| Q201 | E7 |
| Q202 | E7 |
| Q203 | E7 |
| Q204 | E7 |
| R10 | A6 |
| R11 | A6 |
| R12 | A6 |
| R13 | A6 |
| R14 | A6 |
| R15 | A6 |
| R16 | A6 |
| R17 | A6 |
| R18 | A6 |
| R19 | A6 |
| R20 | A6 |
| R21 | A6 |
| R22 | A6 |
| R23 | A6 |
| R26 | C6 |
| R27 | C6 |
| R28 | C6 |
| R33 | C7 |
| R34 | C7 |
| R201 | E7 |

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DATA MULTIPLEX BOARD

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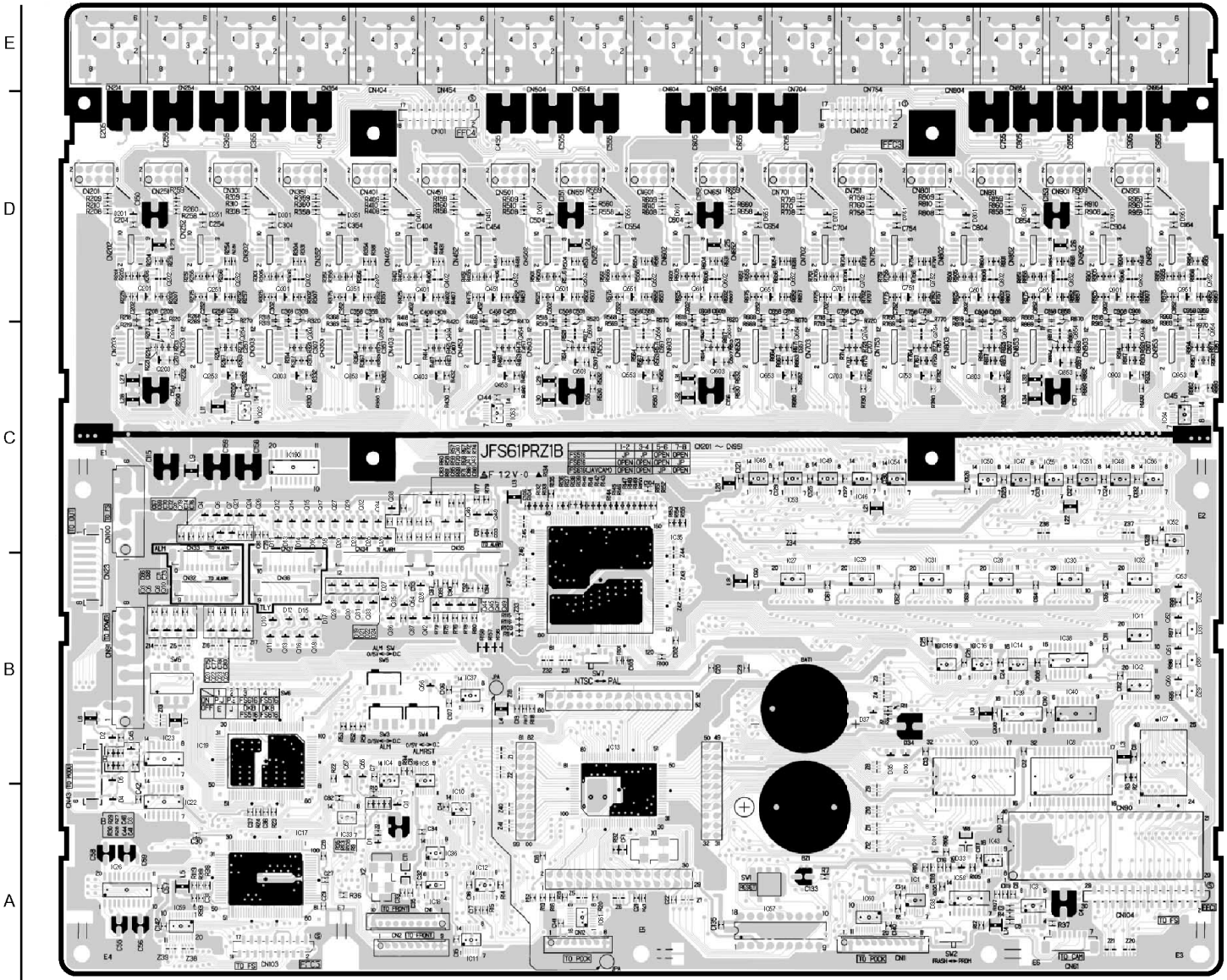
| IC1 | E6 |
| Q1 | E7 |
| Q2 | E7 |
| Q3 | E7 |
| Q4 | E7 |

<INDEX>
ALARM BOARD

| | |
|---|---|
| IC301 | C7 |

# CONDUCTOR VIEW OF MAIN BOARD

## MAIN BOARD

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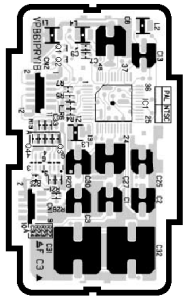
MAIN BOARD

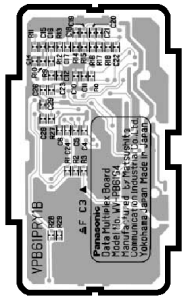
| | | | | | |
|---|---|---|---|---|---|
| IC1 | A4 | Q35 | B2 | D1 | A2 |
| IC3 | A5 | Q36 | B2 | D2 | B1 |
| IC4 | B2 | Q37 | B2 | D3 | B1 |
| IC5 | B2 | Q38 | C2 | D10 | B2 |
| IC7 | B5 | Q40 | C2 | D11 | C2 |
| IC8 | B5 | Q41 | C2 | D12 | B2 |
| IC9 | B5 | Q42 | B2 | D13 | C2 |
| IC10 | A2 | Q43 | C2 | D14 | C2 |
| IC11 | A2 | Q44 | B2 | D15 | B2 |
| IC12 | A2 | Q45 | B2 | D16 | C2 |
| IC13 | B3 | Q46 | C2 | D17 | B2 |
| IC14 | B5 | Q47 | B2 | D18 | C2 |
| IC15 | B5 | Q48 | C3 | D19 | B2 |
| IC16 | B5 | Q49 | B2 | D20 | C2 |
| IC17 | A2 | Q50 | B2 | D21 | B2 |
| IC18 | A2 | Q51 | B2 | D22 | B2 |
| IC19 | B1 | Q52 | B2 | D23 | C2 |
| IC22 | A1 | Q53 | B2 | D24 | B2 |
| IC23 | B1 | Q54 | B2 | D25 | C2 |
| IC26 | A1 | Q55 | B2 | D26 | C2 |
| IC27 | B4 | Q56 | B2 | D27 | B2 |
| IC28 | B5 | Q57 | B2 | D28 | B2 |
| IC29 | B4 | Q2C1 | D2 | D29 | B6 |
| IC30 | B5 | Q2C2 | D2 | D30 | B6 |
| IC31 | B4 | Q2C3 | C2 | D31 | B6 |
| IC32 | B5 | Q2C4 | C2 | D32 | B6 |
| IC33 | A2 | Q2E1 | D2 | D33 | A5 |
| IC35 | C3 | Q2E2 | D2 | D34 | A4 |
| IC36 | A2 | Q2E3 | C2 | D35 | B4 |
| IC37 | B2 | Q2E4 | C2 | D36 | B4 |
| IC38 | B5 | Q3C1 | D2 | D37 | B4 |
| IC39 | B5 | Q3C2 | D2 | D201 | D1 |
| IC40 | B5 | Q3C3 | C2 | D251 | D1 |
| IC41 | B5 | Q3C4 | C2 | D301 | D2 |
| IC42 | B5 | Q3E1 | D2 | D351 | D2 |
| IC43 | A5 | Q3E2 | D2 | D401 | D2 |
| IC45 | C4 | Q3E3 | C2 | D451 | D3 |
| IC46 | C4 | Q3E4 | C2 | D501 | D3 |
| IC47 | C5 | Q4C1 | D2 | D551 | D3 |
| IC48 | C5 | Q4C2 | D2 | D601 | D3 |
| IC49 | C4 | Q4C3 | C2 | D651 | D4 |
| IC50 | C5 | Q4C4 | C2 | D701 | D4 |
| IC51 | C5 | Q4E1 | D2 | D751 | D4 |
| IC52 | C5 | Q4E2 | D2 | D801 | D5 |
| IC53 | C4 | Q4E3 | C2 | D851 | D5 |
| IC54 | C4 | Q4E4 | C2 | D901 | D5 |
| IC55 | C5 | Q5C1 | D2 | D951 | D6 |
| IC56 | C5 | Q5C2 | D2 | | |
| IC57 | A4 | Q5C3 | C2 | | |
| IC58 | A5 | Q5C4 | C2 | | |
| IC59 | A1 | Q5E1 | D2 | | |
| IC60 | A4 | Q5E2 | D2 | | |
| IC61 | A3 | Q5E3 | C2 | | |
| IC62 | C1 | Q5E4 | C2 | | |
| IC63 | C3 | Q6C1 | D2 | | |
| IC64 | C6 | Q6C2 | D2 | | |
| | | Q6C3 | C2 | | |
| Q1 | A2 | Q6C4 | C2 | | |
| Q3 | B1 | Q6E1 | D2 | | |
| Q4 | C1 | Q6E2 | D2 | | |
| Q5 | B1 | Q6E3 | C2 | | |
| Q6 | C1 | Q6E4 | C2 | | |
| Q7 | C1 | Q7C1 | D2 | | |
| Q8 | B1 | Q7C2 | D2 | | |
| Q9 | C1 | Q7C3 | C2 | | |
| Q10 | B1 | Q7C4 | C2 | | |
| Q11 | B2 | Q7E1 | D2 | | |
| Q12 | C2 | Q7E2 | D2 | | |
| Q13 | B2 | Q7E3 | C2 | | |
| Q14 | C2 | Q7E4 | C2 | | |
| Q15 | C2 | Q8C1 | D5 | | |
| Q16 | B2 | Q8C2 | D5 | | |
| Q17 | C2 | Q8C3 | C5 | | |
| Q18 | B2 | Q8C4 | C5 | | |
| Q19 | C1 | Q8E1 | D5 | | |
| Q20 | B1 | Q8E2 | D5 | | |
| Q21 | C1 | Q8E3 | C5 | | |
| Q22 | B1 | Q8E4 | C5 | | |
| Q23 | B1 | Q9C1 | D5 | | |
| Q24 | C1 | Q9C2 | D5 | | |
| Q25 | B1 | Q9C3 | C5 | | |
| Q26 | C2 | Q9C4 | C5 | | |
| Q27 | C2 | Q9E1 | D6 | | |
| Q28 | B2 | Q9E2 | D6 | | |
| Q29 | C2 | Q9E3 | C6 | | |
| Q30 | B2 | Q9E4 | C6 | | |
| Q31 | B2 | | | | |
| Q32 | C2 | | | | |
| Q33 | B2 | | | | |
| Q34 | C2 | | | | |

# CONDUCTOR VIEW OF DATA MULTIPLEX / COMMUNICATION / OUTPUT / ALARM / MODULAR BOARDS

## DATA MULTIPLEX BOARD

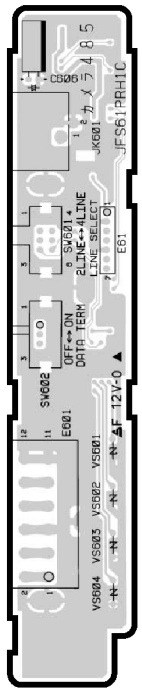


(COMPONENT SIDE VIEW)

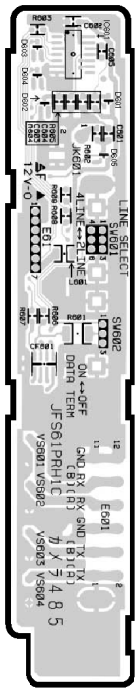


(PATTERN SIDE VIEW)

## COMMUNICATION BOARD

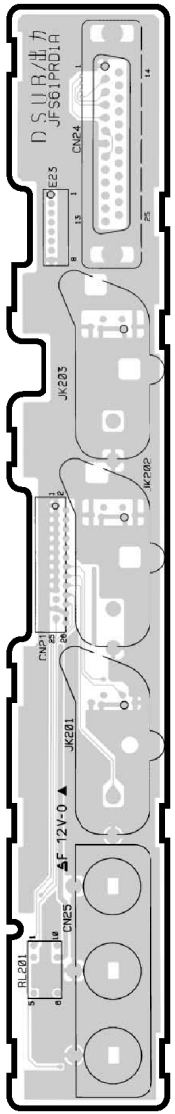


(COMPONENT SIDE VIEW)

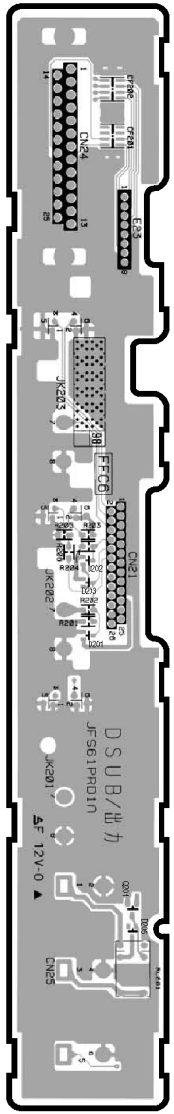


(PATTERN SIDE VIEW)

## OUTPUT BOARD

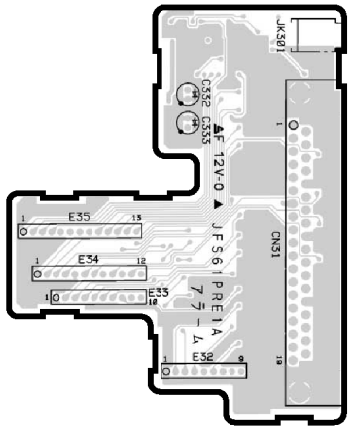


(COMPONENT SIDE VIEW)

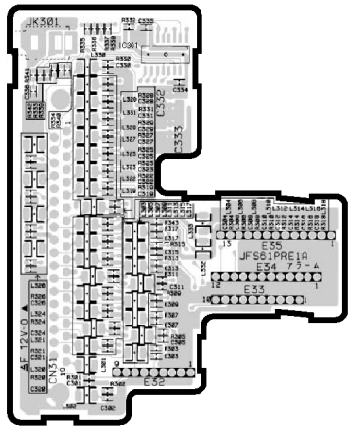


(PATTERN SIDE VIEW)

## ALARM BOARD

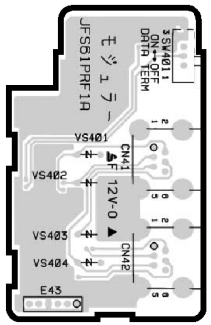


(COMPONENT SIDE VIEW)

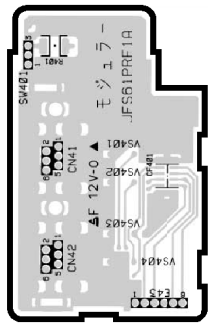


(PATTERN SIDE VIEW)

## MODULAR BOARD



(COMPONENT SIDE VIEW)



(PATTERN SIDE VIEW)

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**DATA MULTIPLEX BOARD**

| | |
|---|---|
| IC1 | D1 |
| Q1 | D1 |
| Q2 | D1 |
| Q3 | D1 |
| Q4 | D1 |

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**COMMUNICATION BOARD**

| | |
|---|---|
| IC60' | C2 |
| D601 | C2 |
| D602 | C2 |
| D605 | C2 |

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**OUTPUT BOARD**

| | |
|---|---|
| Q201 | A4 |
| D201 | B4 |
| D202 | C8 |
| D203 | C4 |
| D205 | C4 |

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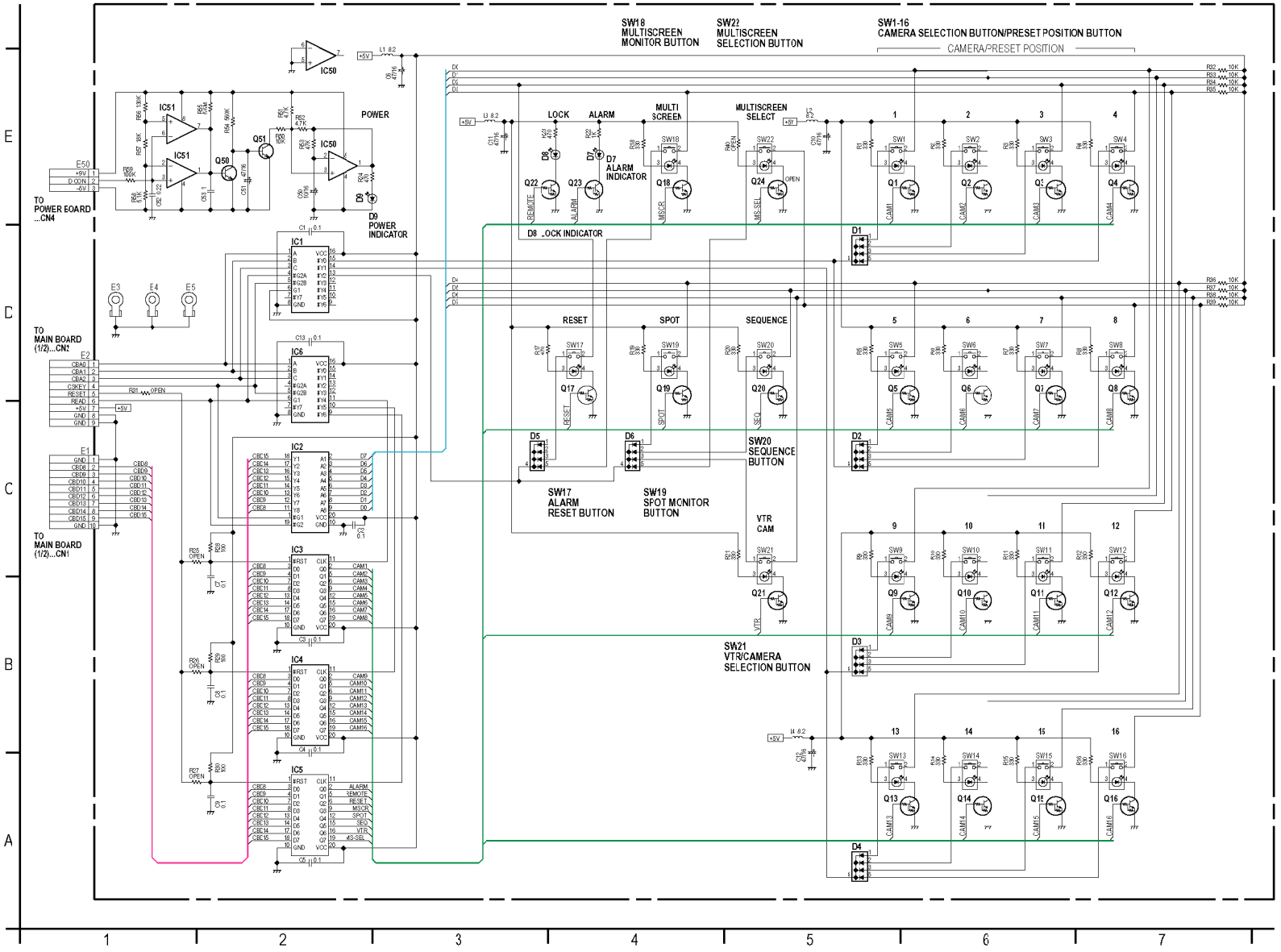
**ALARM BOARD**

| | |
|---|---|
| IC30' | D6 |

# SCHEMATIC DIAGRAM OF FRONT BOARD

## FRONT BOARD

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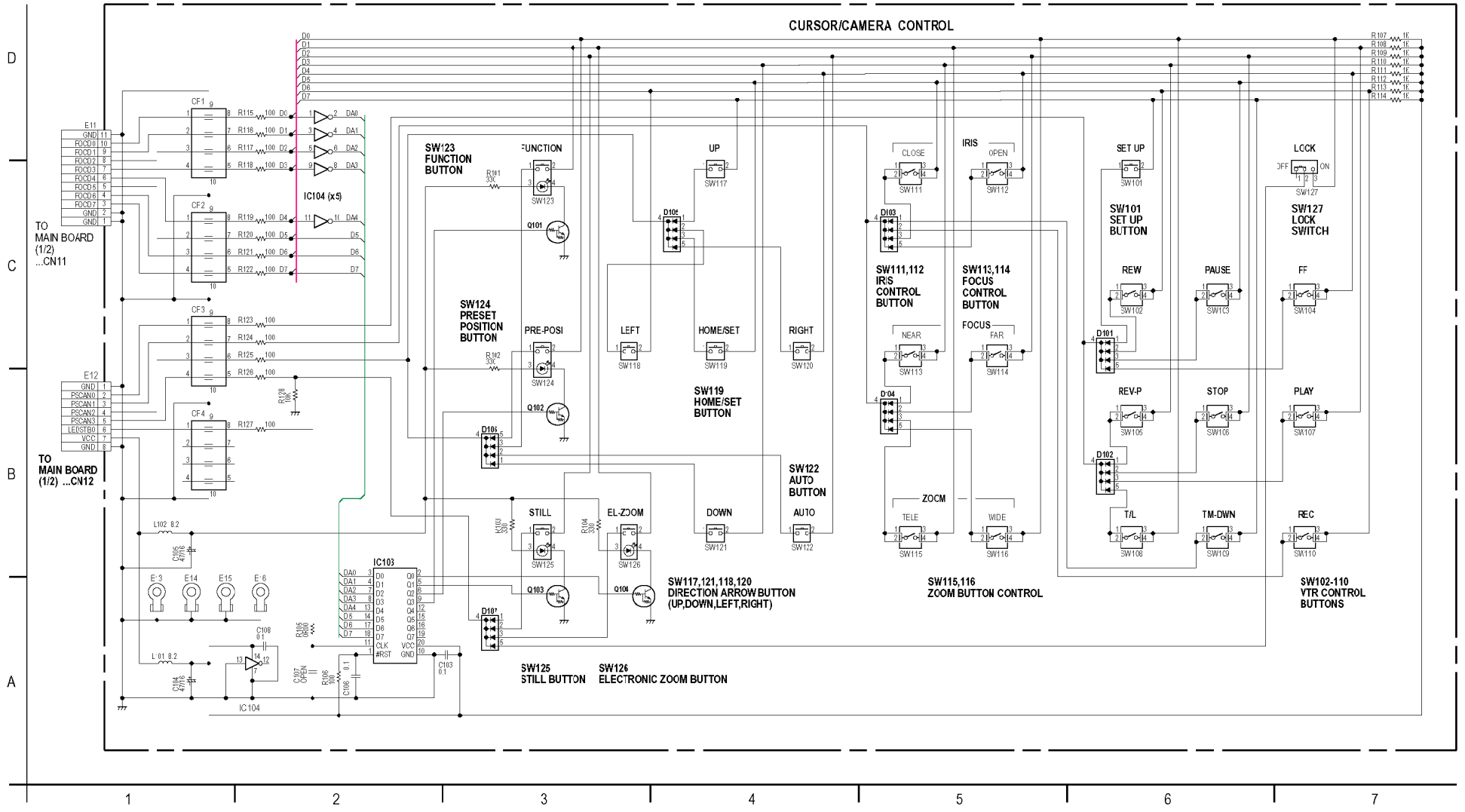
FRONT BOARD

| | |
|---|---|
| IC1 | D2 |
| IC2 | C2 |
| IC3 | B2/C2 |
| IC4 | B2 |
| IC5 | A2 |
| IC6 | C2/D2 |
| IC50 | E2 |
| IC51 | E1 |
| Q1 | E6 |
| Q2 | E6 |
| Q3 | E6 |
| Q4 | E7 |
| Q5 | D6 |
| Q6 | D6 |
| Q7 | D6 |
| Q8 | D7 |
| Q9 | B6 |
| Q10 | B6 |
| Q11 | B6 |
| Q12 | B7 |
| Q13 | A6 |
| Q14 | A6 |
| Q15 | A6 |
| Q16 | A7 |
| Q17 | D4 |
| Q18 | E4 |
| Q19 | D4 |
| Q20 | D5 |
| Q21 | B5 |
| Q22 | E4 |
| Q23 | E4 |
| Q24 | E5 |
| Q50 | E2 |
| Q51 | E2 |
| D1 | D5 |
| D2 | C5 |
| D3 | B5 |
| D4 | A5 |
| D5 | C3 |
| D6 | C4 |
| D7 | E4 |
| D8 | E4 |
| D9 | E2/E3 |

# SCHEMATIC DIAGRAM OF POCKET BOARD

## POCKET BOARD

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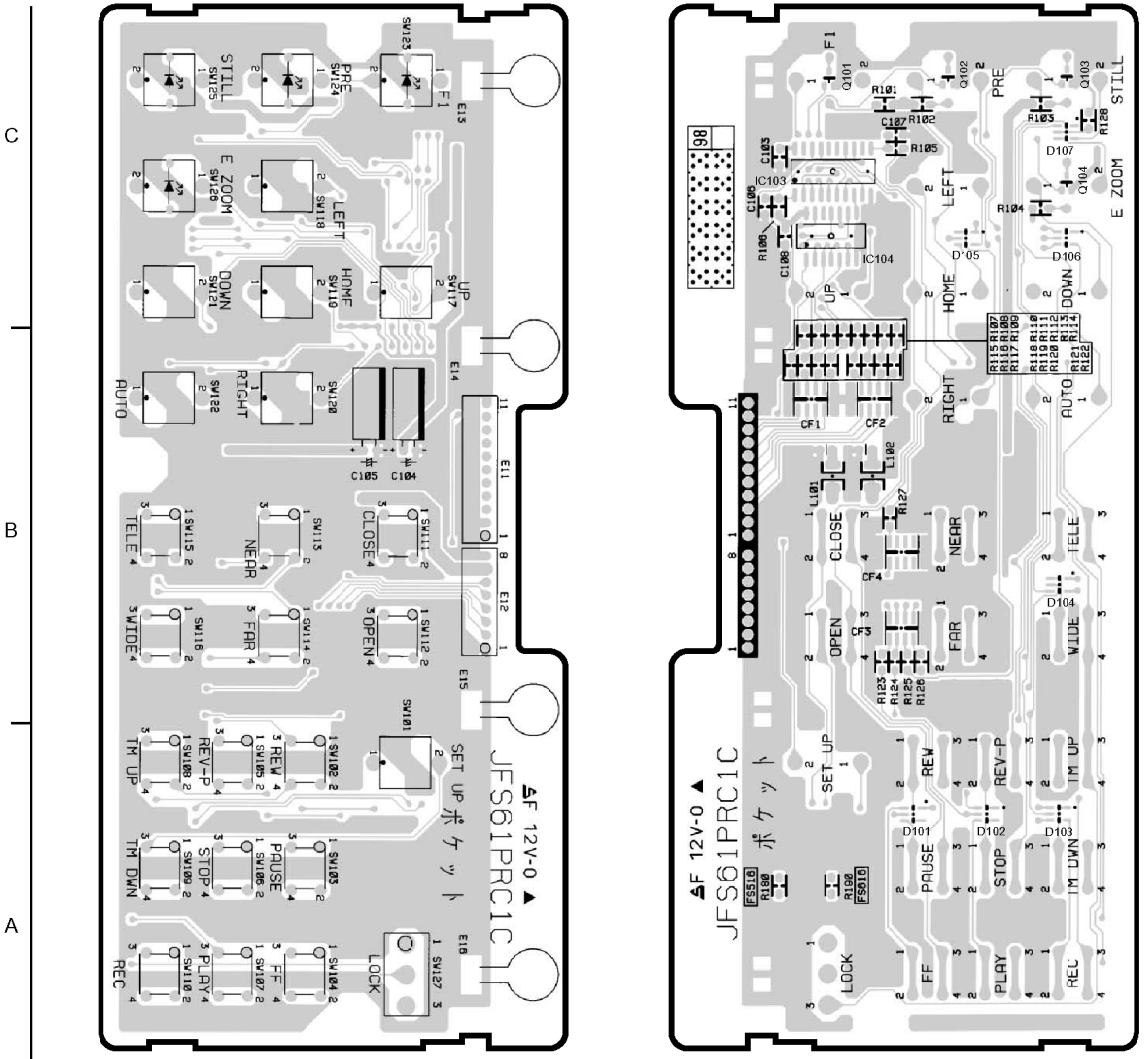
POCKET BOARD

| | | | | | |
|---|---|---|---|---|---|
| IC103 | A2/B2 | C101 | C3 | D101 | C6 |
| IC104 | A2,C2/D2 | C102 | B3 | D102 | B6 |
| | | C103 | A3 | D103 | C5 |
| | | C104 | A3/A4 | D104 | B5 |
| | | | | D105 | C4 |

# CONDUCTOR VIEW OF POCKET BOARD

## POCKET BOARD





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POCKET BOARD

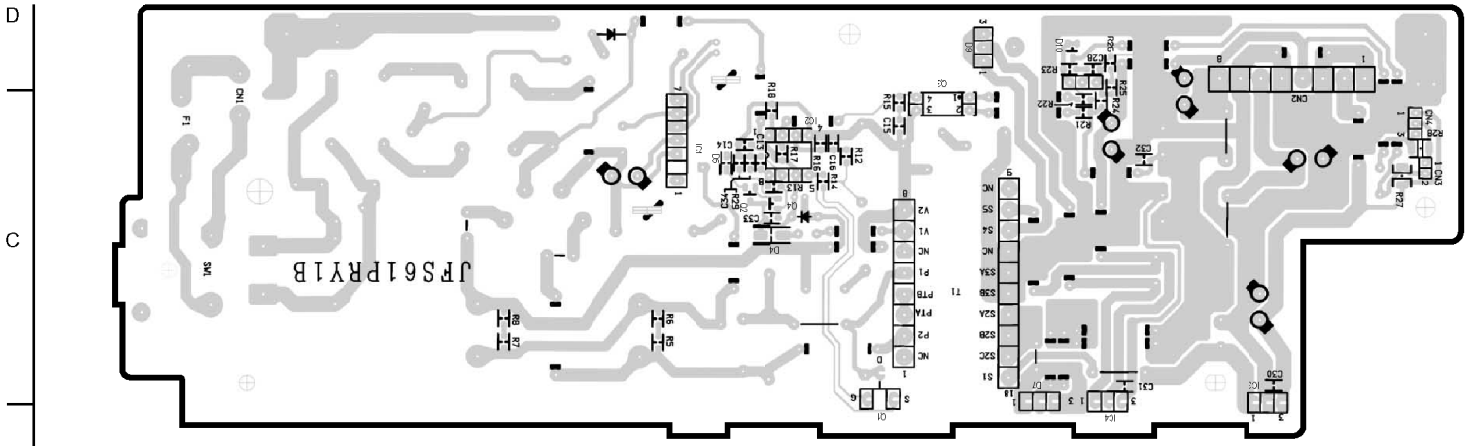
IC103 C2
IC104 C3

Q101 C3
Q104 C3

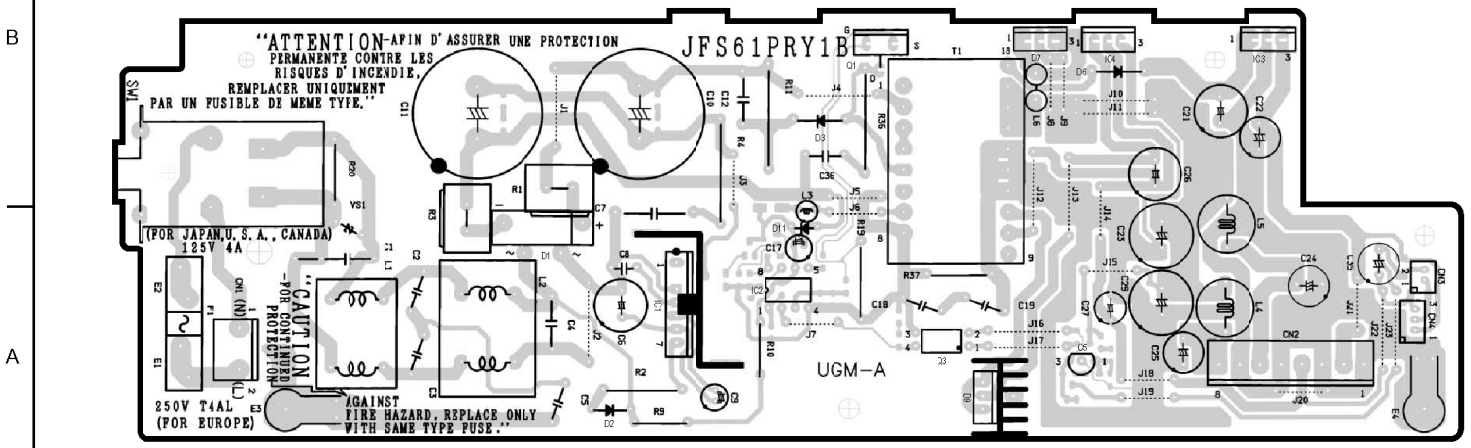
D101 A3
D107 C3

# CONDUCTOR VIEW OF POWER BOARD

## POWER BOARD




*(PATTERN SIDE VIEW)*

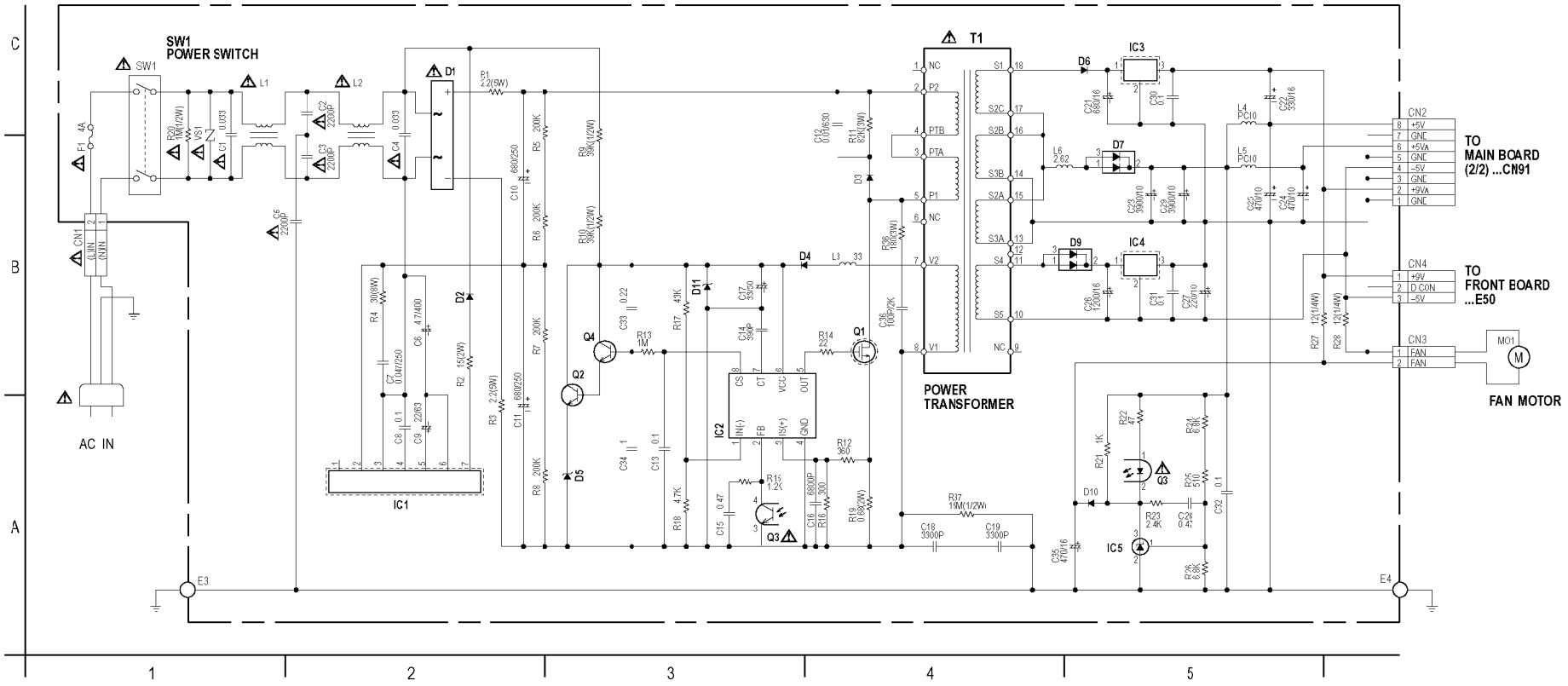



*(COMPONENT SIDE VIEW)*

| POWER BOARD | |
|---|---|
| IC1 | A3 |
| IC2 | A3 |
| IC3 | B4 |
| IC4 | B4 |
| IC5 | A4 |
| | |
| Q1 | B3 |
| Q2 | C3 |
| Q3 | A3 |
| Q4 | C3 |
| | |
| D1 | A2 |
| D2 | A2 |
| D3 | B3 |
| D4 | C3 |
| D5 | C3 |
| D6 | B4 |
| D7 | B4 |
| D9 | A4 |
| D10 | D4 |
| D11 | A3 |

# SCHEMATIC DIAGRAM OF POWER BOARD

## POWER BOARD




**Important safety notice**

Components Identified by " ⚠ " mark have special characteristics for safety.
When replacing any of these components, use only manufacturer's specified parts.

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**POWER BOARD**

| | | | |
|---|---|---|---|
| IC1 | A2 | D1 | B2/C2 |
| IC2 | A3/A4/B3/B4 | D2 | B2 |
| IC3 | C5 | D3 | B4 |
| IC4 | B5 | D4 | B3/B4 |
| IC5 | A5 | D5 | A3 |
| | | D6 | C5 |
| Q1 | B4 | D7 | B5 |
| Q2 | A3/B3 | D9 | B3/B5 |
| Q3 | A3/A5 | | |
| Q4 | B3 | | |

# REPLACEMENT PARTS LIST

## Important Notice

1. Components identified by " ⚠ " mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited (No longer available after discontinuing product).

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| **FRONT BOARD** | | | |
| PCB1 (RTL) | YWJFS61PKB1A | Printed Circuit Board Ass'y | |
| IC1 | MCHC138AE | IC | |
| IC2 | MC74HC540AF | IC | |
| IC3-5 | C0JBAF000039 | IC | |
| IC6 | MCHC138AE | IC | |
| IC50 | NJM4560M | IC | |
| IC51 | YWAN1393S | IC | |
| Q1-23 | B1GBCFJJ0010 | Transistor | |
| Q50,51 | B1ABCF000059 | Transistor | |
| D1-6 | B0ADBJ000002 | Diode | |
| D7 | LN29RD | LED | |
| D8 | LN49YP | LED | |
| D9 | LN242RP | LED | |
| R1-16 | ERJ6GEYJ331V | Carbon | 330 ohms 1/10W |
| R17 | ERJ6GEYJ471V | Carbon | 470 ohms 1/10W |
| R18-21 | ERJ6GEYJ331V | Carbon | 330 ohms 1/10W |
| R22 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R23,24 | ERJ6GEYJ471V | Carbon | 470 ohms 1/10W |
| R28-30 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R32-39 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R50 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R51,52 | ERJ6GEYJ472V | Carbon | 4.7K ohms 1/16W |
| R53 | ERJ6GEYJ473V | Carbon | 47K ohms 1/10W |
| R54 | ERJ6GEYJ564V | Carbon | 560K ohms 1/10W |
| R55 | ERJ6GEYJ565 | Carbon | 5.6M ohms 1/10W |
| R56 | ERJ6GEYJ134 | Carbon | 130K ohms 1/10W |
| R57 | ERJ6GEYJ183V | Carbon | 18K ohms 1/10W |
| R58 | ERJ6GEYJ512V | Carbon | 5.1K ohms 1/10W |
| R59 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| C1-5 | YF400104FZT | Ceramic | 0.1 µF |
| C6 | EEUGA1C470 | Electrolytic | 47 µF 16V |
| C7-9 | YF400104FZT | Ceramic | 0.1 µF |
| C10-12 | EEUGA1C470 | Electrolytic | 47 µF 16V |
| C13 | YF400104FZT | Ceramic | 0.1 µF |
| C50 | EEAGA1C100 | Electrolytic | 10 µF 16V |
| C51 | EEUGA1C470 | Electrolytic | 47 µF 16V |
| C52 | MCUN1C224ZFN | Ceramic | 0.22 µF |
| C53 | F1J1C105A004 | Ceramic | 1 µF |
| L1-4 | G1C8R2J00002 | Coil | 8.2µH |
| SW1-16 | YWSKECFL | Push Switch | |
| SW17 | YWSKECFS | Push Switch | |
| SW18-21 | YWSKECFL | Push Switch | |
| SW22 | YWSKECAF | Push Switch | |
| E1 | ELY014PH10 | 10-pin Wire Ass'y | |
| E2 | ELY914PH09 | 9-pin Wire Ass'y | |
| E10 | YWA2QA0134A4 | Electrode | |
| E50 | YWELY342V503 | 3-pin Wire Ass'y | |
| M61 | YWV6JA0106A4 | Button | |
| M62 | YWV6JA0107A4 | Button | |
| M63 | YWLII55 | LED Spacer | |
| M64 | YWA2NA0300A4 | Spacer | |
| **POCKET BOARD** | | | |
| PCB2 (RTL) | YWJFS61PKC1A | Printed Circuit Board Ass'y | |
| IC103 | C0JBAF000039 | IC | |
| IC104 | YWMCHC04AE | IC | |
| Q101-104 | B1GBCFJJ0010 | Transistor | |
| D101-107 | B0ADBJ000002 | Diode | |
| R101-104 | ERJ6GEYJ331V | Carbon | 330 ohms 1/10W |
| R105 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R106 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R107-114 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R115-127 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R128 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| C103 | YF400104FZT | Ceramic | 0.1 µF |
| C104,105 | EEUGA1C470 | Electrolytic | 47 µF 16V |
| C106,108 | YF400104FZT | Ceramic | 0.1 µF |
| L101,102 | G1C8R2J00002 | Coil | 8.2 µH |
| SW101 | YWSKECAF | Push Switch | |
| SW102-116 | YWSKHQAC | Push Switch | |
| SW117-122 | YWSKECAF | Push Switch | |
| SW123-126 | YWSKECFL | Push Switch | |
| SW127 | YWMS12AAP1 | Slide Switch | |
| CF1-4 | YWNFA41R101T | LC Filter | |
| E10 | YWA2QA0134A4 | Electrode | |
| E11 | YWELY130PH11 | 11-pin Wire Ass'y | |
| E12 | YWELY324PH08 | 8-pin Wire Ass'y | |
| M61 | YWV6JA0106A4 | Button | |
| M62 | YWV6JA0107A4 | Button | |

## OUTPUT BOARD

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB3 (RTL) | YWJFS61PKD1A | Printed Circuit Board Ass'y | |
| Q201 | B1GBGFJJ0001 | Transistor | |
| D201-203 | B0ADCC000004 | Diode | |
| D205 | B0ADCC000004 | Diode | |
| R201 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R202 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R203 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R204 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R205 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R206 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| CF201,202 | YWNFA41R222T | Ceramic Filter | |
| RL201 | AG4019 | Relay | |
| CN21 | YW528072610 | 26-pin Connector | |
| CN24 | YWJBS25S5A3G | 25-pin Connector | |
| CN25 | YWP2283 | 6-pin Connector | |
| JK201-203 | YWB0164 | Jack | |
| E23 | YWELY324PH08 | Wire Ass'y | |

## ALARM BOARD

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB4 (RTL) | YWJFS61PKE1A | Printed Circuit Board Ass'y | |
| IC301 | YWMCHC4051E | IC | |
| R301-331 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R332 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R333 | YWR0816P122D | Metal | 1.2K ohms 1/16W |
| R334 | D1BB27010001 | Metal | 2.7K ohms 1/16W |
| R335 | ERJ3GEYJ472V | Carbon | 4.7K ohms 1/16W |
| R336 | ERJ3GEYJ822V | Carbon | 8.2K ohms 1/16W |
| R337 | ERJ3GEYJ513V | Carbon | 51K ohms 1/16W |
| R338 | ERJ3GEYJ623V | Carbon | 62K ohms 1/16W |
| R341 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| C301-331 | F1H1H103A013 | Ceramic | 0.01 µF |
| C332,333 | EEUGA1C470 | Electrolytic | 47 µF 16V |
| C334,335 | MCUV1E104Z | Ceramic | 0.1 µF |
| L301-331 | G1C101J00002 | Coil | 100µH |
| L332,333 | G1C8R2J00002 | Coil | 8.2µH |
| CN31 | YWRD37SE1M26 | 37-pin Connector | |
| JK301 | YWHSJ078903A | Jack | |
| E32 | YWJFS51L03A | Wire Ass'y | |
| E33 | YWJFS51L04A | Wire Ass'y | |
| E34 | YWJFS51L05A | Wire Ass'y | |
| E35 | YWJFS51L06A | Wire Ass'y | |

## MODULAR BOARD

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB5 (RTL) | YWJFS61PKF1A | Printed Circuit Board Ass'y | |
| VS401-404 | ERZV07D680 | ZNR | |
| R401 | ERJ12YJ151H | Carbon | 150 ohms 1/2W |
| SW401 | K0D112B00037 | Slide Switch | |
| CF401 | YWNFA41R222T | Ceramic Filter | |
| CN41,42 | YWTM11R5C66 | 6-pin Connector | |
| E43 | YWATY626PH06 | Wire Ass'y | |
| M65 | YWV2SA4443A4 | Mounting Angle | |

## COMMUNICATION BOARD

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB6 (RTL) | YWJFS61PKH1A | Printed Circuit Board Ass'y | |
| IC601 | SN75ALS181NS | IC | |
| D601,602 | B0ADCC000004 | Diode | |
| D605 | B0ADCC000004 | Diode | |
| VS601-604 | ERZV07D680 | ZNR | |
| R601 | ERJ12YJ151H | Carbon | 150 ohms 1/2W |
| R602,603 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R604,605 | ERJ6GEYJ153V | Carbon | 15K ohms 1/10W |
| R606,607 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R608,609 | ERJ6GEYJ100V | Carbon | 10 ohms 1/10W |
| C601 | F1J1H101A410 | Ceramic | 100 pF |
| C602 | YF400104FZT | Ceramic | 0.1 µF |
| C603-605 | F1J1H101A410 | Ceramic | 100 pF |
| C606 | EEUGA1C470 | Electrolytic | 47 µF 16V |
| L601 | G1C8R2J00002 | Coil | 8.2µH |
| CF601 | YWNFA41R222T | Ceramic Filter | |
| SW601 | SSSF122L6N | Slide Switch | |
| SW602 | SSSF112L6N | Slide Switch | |
| JK601 | K2HA101B0002 | Jack | |
| E61 | YWJFS51L07A | Wire Ass'y | |
| E601 | YWML800H06P | Terminal | |
| M66 | YWV2SA4444A3 | Mounting Angle | |

## POWER BOARD

| REF. NO. | | PART NO. | DESCRIPTION | |
|---|---|---|---|---|
| PCB7 (RTL) | | YWJFS61PKY1A | Printed Circuit Board Ass'y | |
| IC1 | | YWMK12104150 | IC | |
| IC2 | | YWFA5304P | IC | |
| IC3 | | YWUPC2409AHF | IC | |
| IC4 | | YWUPC2405AHF | IC | |
| IC5 | | YWTA76431S | IC | |
| Q1 | | 2SK1535 | FET | |
| Q2 | | 2SC2412K-T46 | Transistor | |
| Q3 | ⚠ | YWPC123FY2 | Photo Coupler | |
| Q4 | | 2SC2412K-T46 | Transistor | |
| D1 | ⚠ | YWKBL406F | Diode | |
| D2 | | YWERA1506 | Diode | |
| D3 | | YWERB3710 | Diode | |
| D4 | | YWSC2012 | Diode | |
| D5 | | B0BC5R000002 | Diode | |
| D6 | | ERB9302 | Diode | |
| D7 | | YWSF10SC9 | Diode | |
| D9 | | YWSF5LC20U | Diode | |
| D10 | | B0ADCJ000008 | Diode | |
| D11 | | YWRD24JSAB1 | Diode | |
| VS1 | ⚠ | YWJ07N471KP | ZNR | |
| R1 | | ERF5TK2R2 | Wire Wound | 2.2 ohms 5W |
| R2 | | ERG2SJ150 | Metal | 15 ohms 2W |
| R3 | | ERF5TK2R2 | Wire Wound | 2.2 ohms 5W |
| R4 | | ERG3SJ300P | Metal | 30 ohms 3W |
| R5-8 | | YF2116204JT | Carbon | 200K ohms 1/10W |
| R9,10 | | ERDS1TJ393 | Carbon | 39K ohms 1/2W |
| R11 | | ERG3SJ823 | Metal | 82K ohms 3W |
| R12 | | ERJ6GEYJ361 | Carbon | 360 ohms 1/10W |
| R13 | | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R14 | | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R15 | | ERJ6GEYJ122V | Carbon | 1.2K ohms 1/10W |
| R16 | | YF2116301JT | Carbon | 300 ohms 1/10W |
| R17 | | ERJ6GEYJ433V | Carbon | 43K ohms 1/10W |
| R18 | | ERJ6GEYJ472V | Carbon | 4.7K ohms 1/16W |
| R19 | | ERX2SJR68 | Metal | 0.68 ohm 2W |
| R20 | ⚠ | ERC12ZGM105 | Solid | 1M ohms 1/2W |
| R21 | | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R22 | | YF2116470JT | Carbon | 47 ohms 1/10W |
| R23 | | ERJ6GEYJ242 | Carbon | 2.4K ohms 1/10W |
| R24 | | YWR1220P682D | Metal | 6.8K ohms |
| R25 | | YWR1220P511D | Metal | 510 ohms |
| R26 | | YWR1220P682D | Metal | 6.8K ohms |
| R27,28 | | ERJ14YJ120 | Carbon | 12 ohms 1/4W |
| R36 | | ERG3SJ181P | Metal | 180 ohms 1/16W |

| REF. NO. | | PART NO. | DESCRIPTION | |
|---|---|---|---|---|
| R37 | | ERC12ZGM156 | Solid | 15M ohms 1/2W |
| C1 | ⚠ | YWX75M333VS0 | Plastic | 0.033 µF |
| C2,3 | ⚠ | YW12FY222ML7 | Ceramic | 2200 pF |
| C4 | ⚠ | YWX75M333VS0 | Plastic | 0.033 µF |
| C5 | ⚠ | YW12FY222ML7 | Ceramic | 2200 pF |
| C6 | | ECA2GHG4R7 | Electrolytic | 4.7 µF 400V |
| C7 | | ECQU2A473MV | Plastic | 0.047 µF |
| C8 | | ECQV1H104JM | Plastic | 0.1 µF 50V |
| C9 | | ECA1JHG220 | Electrolytic | 22 µF 63V |
| C10,11 | | EC0S2EB681CB | Electrolytic | 680 µF 250V |
| C12 | | ECQE6103KF | Plastic | 0.01 µF |
| C13 | | MCUV1E104KBN | Ceramic | 0.1 µF |
| C14 | | YF400391CHJT | Ceramic | 390 pF |
| C15 | | F1J1C474A051 | Ceramic | 0.47 µF |
| C16 | | YF400682XKT | Ceramic | 6800 pF |
| C17 | | ECA1HHG330 | Electrolytic | 33 µF 50V |
| C18,19 | | ECKDRS332MEY | Ceramic | 3300 pF |
| C21 | | EEUFC1C681 | Electrolytic | 680 µF 16V |
| C22 | | EEUFC1C331 | Electrolytic | 330 µF 16V |
| C23 | | EEUFC1A392L | Electrolytic | 3900 µF 10V |
| C24,25 | | EEUFC1A471 | Electrolytic | 470 µF 10V |
| C26 | | EEUFC1C122 | Electrolytic | 1200 µF 16V |
| C27 | | EEUFC1A221 | Electrolytic | 220 µF 10V |
| C28 | | F1J1C474A051 | Ceramic | 0.47 µF |
| C29 | | EEUFC1A392L | Electrolytic | 3900 µF 10V |
| C30-32 | | YF400104FZT | Ceramic | 0.1 µF |
| C33 | | MCUN1C224ZFN | Ceramic | 0.22 µF |
| C34 | | F1J1C105A004 | Ceramic | 1 µF |
| C35 | | EEUFC1C471L | Electrolytic | 470 µF 16V |
| C36 | | ECKD3D101KBP | Ceramic | 100 pF |
| L1 | ⚠ | YWLF4D682 | Coil | 6800µH |
| L2 | | YW0R8A183F24 | Coil | |
| L3 | | ELESQ330KA | Coil | 33 µH |
| L4,5 | | YWPC10220K | Coil | 22 µH |
| L6 | | J0JKB0000004 | Coil | |
| T1 | ⚠ | ETS33AC3J6AD | Power Transformer | |
| SW1 | ⚠ | YWSDDFA3 | Push Switch | |
| CN1 | ⚠ | YWB2P3VH | 2-pin Connector | |
| CN2 | | YWB8PVH | 8-pin Connector | |
| CN3 | | YW53014-0210 | 2-pin Connector | |
| CN4 | | YW530140310 | 3-pin Connector | |
| E1,2 | | K3GE1BB00004 | Holder | |
| E3 | ⚠ | YW45T01130L | Insulator | |
| E4 | ⚠ | YW851040 | Insulator | |
| E10 | | YWA2QA0134A4 | Electrode | |
| M70 | | YWV2SA2317A4 | Mounting Angle | |
| M71 | ⚠ | YWV2PA1124B3 | Insulator Sheet | |
| M72 | | YWV7DA0193A4 | Heat Sink A | |
| M73 | | YWV7DA1067A4 | Heat Sink B | |
| M74 | | YWV7DB0327A2 | Heat Sink for Power Board | |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| **MAIN BOARD** | | |
| PCB8 (RTL) | YWJFS61PKZ1A | Printed Circuit Board Ass'y |
| IC1 | YW74HC08DTE | IC |
| IC3 | YWTL7705CPSB | IC |
| IC4 | YW74HC32ADTE | IC |
| IC5 | 74HC4538ADTE | IC |
| IC7 | YWF400BA90PT | IC |
| IC8,9 | HM628128BFP7 | LSI |
| IC10 | YW74HC32ADTE | IC |
| IC11 | YW74HC04ADTE | IC |
| IC12 | YW74HC32ADTE | IC |
| IC13 | MC68307PQFP | IC |
| IC14-16 | 74HC138ADTE | IC |
| IC17 | YWRF5C81 | IC |
| IC18 | YWNJU6321PE | LSI |
| IC19 | YWTE7752 | IC |
| IC22,23 | SN75ALS181NS | IC |
| IC26 | C1DB00000053 | IC |
| IC27-32 | YW74AC574DTE | IC |
| IC33 | YW74HC04ADTE | IC |
| IC35 | YWD65804G089 | IC |
| IC36 | YW74HC08DTE | IC |
| IC37 | YW74HC00ADTE | IC |
| IC38,39 | MC74HC161AF | IC |
| IC40 | MC74HC4020AF | IC |
| IC41,42 | YW74AC574DTE | IC |
| IC43 | 74HC4538ADTE | IC |
| IC45-52 | YW74HC08DTE | IC |
| IC53-56 | YW74HC32ADTE | IC |
| IC57 | YWMSM62X42BR | IC |
| IC58 | MC74HC164AF | IC |
| IC59 | YW74AC574DTE | IC |
| IC60 | YW74AC640DTE | IC |
| IC61 | 74HC138ADTE | IC |
| IC62-64 | YW74HC04ADTE | IC |
| Q1 | B1GBCFJJ0010 | Transistor |
| Q3-10 | B1GDCFJJ0010 | Transistor |
| Q11-18 | B1GBGFJJ0001 | Transistor |
| Q19-26 | B1GDCFJJ0010 | Transistor |
| Q27-34 | B1GBGFJJ0001 | Transistor |
| Q35-37 | B1GBCFJJ0010 | Transistor |
| Q38,40 | B1ABCF000059 | Transistor |
| Q41-49 | B1GDCFJJ0010 | Transistor |
| Q50-53 | B1GBCFJJ0010 | Transistor |
| Q54 | B1GDCFJJ0010 | Transistor |
| Q55-57 | B1GBGFJJ0001 | Transistor |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| Q201 | B1ADCF000038 | Transistor |
| Q202 | IMZ1T9 | Transistor |
| Q203 | 2SA1037K-T47 | Transistor |
| Q204 | IMZ1T9 | Transistor |
| Q251 | B1ADCF000038 | Transistor |
| Q252 | IMZ1T9 | Transistor |
| Q253 | 2SA1037K-T47 | Transistor |
| Q254 | IMZ1T9 | Transistor |
| Q301 | B1ADCF000038 | Transistor |
| Q302 | IMZ1T9 | Transistor |
| Q303 | 2SA1037K-T47 | Transistor |
| Q304 | IMZ1T9 | Transistor |
| Q351 | B1ADCF000038 | Transistor |
| Q352 | IMZ1T9 | Transistor |
| Q353 | 2SA1037K-T47 | Transistor |
| Q354 | IMZ1T9 | Transistor |
| Q401 | B1ADCF000038 | Transistor |
| Q402 | IMZ1T9 | Transistor |
| Q403 | 2SA1037K-T47 | Transistor |
| Q404 | IMZ1T9 | Transistor |
| Q451 | B1ADCF000038 | Transistor |
| Q452 | IMZ1T9 | Transistor |
| Q453 | 2SA1037K-T47 | Transistor |
| Q454 | IMZ1T9 | Transistor |
| Q501 | B1ADCF000038 | Transistor |
| Q502 | IMZ1T9 | Transistor |
| Q503 | 2SA1037K-T47 | Transistor |
| Q504 | IMZ1T9 | Transistor |
| Q551 | B1ADCF000038 | Transistor |
| Q552 | IMZ1T9 | Transistor |
| Q553 | 2SA1037K-T47 | Transistor |
| Q554 | IMZ1T9 | Transistor |
| Q601 | B1ADCF000038 | Transistor |
| Q602 | IMZ1T9 | Transistor |
| Q603 | 2SA1037K-T47 | Transistor |
| Q604 | IMZ1T9 | Transistor |
| Q651 | B1ADCF000038 | Transistor |
| Q652 | IMZ1T9 | Transistor |
| Q653 | 2SA1037K-T47 | Transistor |
| Q654 | IMZ1T9 | Transistor |
| Q701 | B1ADCF000038 | Transistor |
| Q702 | IMZ1T9 | Transistor |
| Q703 | 2SA1037K-T47 | Transistor |
| Q704 | IMZ1T9 | Transistor |
| Q751 | B1ADCF000038 | Transistor |
| Q752 | IMZ1T9 | Transistor |
| Q753 | 2SA1037K-T47 | Transistor |
| Q754 | IMZ1T9 | Transistor |
| Q801 | B1ADCF000038 | Transistor |
| Q802 | IMZ1T9 | Transistor |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| Q803 | 2SA1037K-T47 | Transistor | | R68 | ERJ3GEYJ564 | Carbon | 560K ohms 1/16W |
| Q804 | IMZ1T9 | Transistor | | R69-71 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| Q851 | B1ADCF000038 | Transistor | | R72-80 | ERJ3GEYJ472V | Carbon | 4.7K ohms 1/16W |
| Q852 | IMZ1T9 | Transistor | | R92 | ERJ3GEYJ221V | Carbon | 220 ohms 1/16W |
| Q853 | 2SA1037K-T47 | Transistor | | R93 | ERJ3GEYJ472V | Carbon | 4.7K ohms 1/16W |
| Q854 | IMZ1T9 | Transistor | | R94 | ERJ3GEYJ473V | Carbon | 47K ohms 1/16W |
| Q901 | B1ADCF000038 | Transistor | | R95-98 | ERJ3GEYJ471V | Carbon | 470 ohms 1/16W |
| Q902 | IMZ1T9 | Transistor | | R99 | ERJ3GEYJ472V | Carbon | 4.7K ohms 1/16W |
| Q903 | 2SA1037K-T47 | Transistor | | R100,101 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| Q904 | IMZ1T9 | Transistor | | R103,104 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| Q951 | B1ADCF000038 | Transistor | | R105 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| Q952 | IMZ1T9 | Transistor | | R107 | ERJ3GEYJ332V | Carbon | 3.3K ohms 1/16W |
| Q953 | 2SA1037K-T47 | Transistor | | R110 | ERJ3GEYJ472V | Carbon | 4.7K ohms 1/16W |
| Q954 | IMZ1T9 | Transistor | | R111 | ERJ3GEYJ111V | Carbon | 110K ohms 1/16W |
| D1-3 | B0ADCC000004 | Diode | | R112 | ERJ3GEYJ271V | Carbon | 270 ohms 1/16W |
| D10-28 | B0ADCC000004 | Diode | | R113,114 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| D29-32 | LN1261CTR | Light Emitting Diode | | R115 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| D33,34 | B0ADCC000004 | Diode | | R117,118 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| D35-37 | YWRB701DT146 | Diode | | R119 | ERJ3GEYJ472V | Carbon | 4.7K ohms 1/16W |
| D201,251 | B0ADCC000004 | Diode | | R132-155 | ERJ3GEYJ221V | Carbon | 220 ohms 1/16W |
| D301,351 | B0ADCC000004 | Diode | | R201 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| D401,451 | B0ADCC000004 | Diode | | R202 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| D501,551 | B0ADCC000004 | Diode | | R204 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| D601,651 | B0ADCC000004 | Diode | | R205 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| D701,751 | B0ADCC000004 | Diode | | R206 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| D801,851 | B0ADCC000004 | Diode | | R207,208 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| D901,951 | B0ADCC000004 | Diode | | R210 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R1-3 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R213 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R4 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R214 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R5,7 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R217 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R9 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R218 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R10-12 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R219 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R13,14 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R220 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R15 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R221,225 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R16 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R230 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R18,19 | ERJ3GEYJ331V | Carbon | 330 ohms 1/16W | R231,232 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R20 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R251 | D0YBR0000007 | Carbon | 0 ohm 1 /16W |
| R21 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R252 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R22 | ERJ3GEYJ220V | Carbon | 22 ohms 1/16W | R254 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R24 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R255 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R27,28 | ERJ3GEYJ153V | Carbon | 15K ohms 1/16W | R256 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R29,30 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R257,258 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R35 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R260 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R37 | ERJ3GEYJ152V | Carbon | 1.5K ohms 1/16W | R263 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R38,39 | D0YBR0000007 | Carbon | 0 ohm1/16W | R264 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R51-53 | ERJ3GEYJ472V | Carbon | 4.7K ohms 1/16W | R267 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R57 | D0GB104JA001 | Carbon | 100K ohms 1/16W | R268 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R58 | ERJ3GEYJ564 | Carbon | 560K ohms 1/16W | R269 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R59-61 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R270 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R67 | D0GB104JA001 | Carbon | 100K ohms 1/16W | R271,275 | D0GB103JA001 | Carbon | 10K ohms 1/16W |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| R280 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R451 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R281,282 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R452 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R301 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R454 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R302 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R455 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R304 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R456 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R305 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W | R457,458 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R306 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W | R460 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R307,308 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R463 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R310 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W | R464 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R313 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R467 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R314 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W | R468 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R317 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R469 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R318 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R470 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R319 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W | R471,475 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R320 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R480 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R321,325 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R481,482 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R330 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R501 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R331,332 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R502 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R351 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R504 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R352 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R505 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R354 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R506 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R355 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W | R507,508 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R356 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W | R510 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R357,358 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R513 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R360 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W | R514 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R363 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R517 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R364 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W | R518 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R367 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R519 | ERJ3GEYJ334V | Carbon | 330K ohms1/16W |
| R368 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R520 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R369 | ERJ3GEYJ334V | Carbon | 330K 1/16W | R521,525 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R370 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R530 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R371,375 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R531,532 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R380 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R551 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R381,382 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R552 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R401 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R554 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R402 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R555 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R404 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R556 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R405 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W | R557,558 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R406 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W | R560 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R407,408 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R563 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R410 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W | R564 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R413 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R567 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R414 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W | R568 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R417 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R569 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R418 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R570 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R419 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W | R571,575 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R420 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R580 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R421,425 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R581,582 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R430 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R601 | D0YBR0000007 | Carbon | 0 ohm1/16W |
| R431,432 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R602 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| R604 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R756 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R605 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W | R757,758 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R606 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W | R760 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R607,608 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R763 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R610 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W | R764 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R613 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R767 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R614 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W | R768 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R617 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R769 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R618 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R770 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R619 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W | R771,775 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R620 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R780 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R621,625 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R781,782 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R630 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R801 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R631,632 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R802 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R651 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R804 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R652 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R805 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R654 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R806 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R655 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W | R807,808 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R656 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W | R810 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R657,658 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R813 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R660 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W | R814 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R663 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R817 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R664 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W | R818 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R667 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R819 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R668 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R820 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R669 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W | R821,825 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R670 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R830 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R671,675 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R831,832 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R680 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R851 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R601,602 | D0GD101JA001 | Carbon | 100 ohms 1/16W | R052 | D0GD222JA001 | Carbon | 2.2K ohms 1/16W |
| R701 | D0YBR0000007 | Carbon | 0 ohm1/16W | R854 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R702 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R855 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R704 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R856 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R705 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W | R857,858 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R706 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W | R860 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R707,708 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R863 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R710 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W | R864 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R713 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R867 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R714 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W | R868 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R717 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R869 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R718 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R870 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R719 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W | R871,875 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R720 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R880 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R721,725 | D0GB103JA001 | Carbon | 10K ohms 1/16W | R881,882 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R730 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R901 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R731,732 | D0GB101JA001 | Carbon | 100 ohms 1/16W | R902 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R751 | D0YBR0000007 | Carbon | 0 ohm 1/16W | R904 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R752 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W | R905 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R754 | D0GB102JA001 | Carbon | 1K ohms 1/16W | R906 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R755 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W | R907,908 | D0YBR0000007 | Carbon | 0 ohm 1/16W |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R910 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R913 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R914 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R917 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R918 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R919 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R920 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R921,925 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R930 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R931,932 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R951 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R952 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R954 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R955 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R956 | ERJ3GEYJ113V | Carbon | 11K ohms 1/16W |
| R957,958 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R960 | ERJ3GEYJ750V | Carbon | 75 ohms 1/16W |
| R963 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R964 | ERJ3GEYJ561V | Carbon | 560 ohms 1/16W |
| R967 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R968 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R969 | ERJ3GEYJ334V | Carbon | 330K ohms 1/16W |
| R970 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R971,975 | D0GB103JA001 | Carbon | 10K ohms 1/16W |
| R980 | D0YBR0000007 | Carbon | 0 ohm 1/16W |
| R981,982 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| Z1,2 | EXBV8V220J | Block Resistor | |
| Z3-6 | EXBV8V103J | Block Resistor | |
| Z7 | EXBV8V220J | Block Resistor | |
| Z9-11 | EXBV8V221J | Block Resistor | |
| Z12 | EXBV8V220J | Block Resistor | |
| Z13 | EXBV8V103J | Block Resistor | |
| Z14-17 | EXBV8V472J | Block Resistor | |
| Z18,20 | EXBV8V103J | Block Resistor | |
| Z21,31 | EXBV8V103J | Block Resistor | |
| Z32-37 | EXBV8V103J | Block Resistor | |
| Z38,39 | EXBV8V220J | Block Resistor | |
| Z40,41 | EXBV8V101J | Block Resistor | |
| Z42-47 | EXBV8V221J | Block Resistor | |
| C1,3 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C4 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C5 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C6 | F1H1H103A013 | Ceramic | 0.01 µF |
| C7,8 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C9 | EEVHB1C220R | Electrolytic | 22 µF 16V |
| C10-16 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C17 | F1H1H300A004 | Ceramic | 30 pF |
| C18-32 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C33 | F1H1H100A017 | Ceramic | 10 pF |
| C34 | MCUV1E104ZFV | Ceramic | 0.1 µF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C35 | F1H1H100A017 | Ceramic | 10 pF |
| C36,37 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C41,42 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C44-46 | F1H1H101A004 | Ceramic | 100 pF |
| C55,56 | EEVHB1C100R | Electrolytic | 10 µF 16V |
| C57 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C58,59 | EEVHB1C100R | Electrolytic | 10 µF 16V |
| C60-82 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C83,85 | F1H1A105A004 | Ceramic | 1 µF |
| C86-94 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C102-106 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C107 | F1H1H300A004 | Ceramic | 30 pF |
| C108-113 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C116 | F1H1H102A004 | Ceramic | 1000 pF |
| C117 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C118 | F1H1E911A034 | Ceramic | 910 pF |
| C119 | F1H1H101A004 | Ceramic | 100 pF |
| C121-132 | F1H1H103A013 | Ceramic | 0.01 µF |
| C133 | EEVHB1H1R0R | Electrolytic | 1 µF 50V |
| C134 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C135,136 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C140-145 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C150-158 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C160 | EEUFC1C331 | Electrolytic | 330 µF 16V |
| C202,204 | F1H1H103A013 | Ceramic | 0.01 µF |
| C205 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C207 | F1H1H121A004 | Ceramic | 120 pF |
| C208 | F1H1C104A001 | Ceramic | 0.1 µF |
| C209 | F1H1E223A002 | Ceramic | 0.022 µF |
| C252,254 | F1H1H103A013 | Ceramic | 0.01 µF |
| C255 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C257 | F1H1H121A004 | Ceramic | 120 pF |
| C258 | F1H1C104A001 | Ceramic | 0.1 µF |
| C259 | F1H1E223A002 | Ceramic | 0.022 µF |
| C302,304 | F1H1H103A013 | Ceramic | 0.01 µF |
| C305 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C307 | F1H1H121A004 | Ceramic | 120 pF |
| C308 | F1H1C104A001 | Ceramic | 0.1 µF |
| C309 | F1H1E223A002 | Ceramic | 0.022 µF |
| C352,354 | F1H1H103A013 | Ceramic | 0.01 µF |
| C355 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C357 | F1H1H121A004 | Ceramic | 120 pF |
| C358 | F1H1C104A001 | Ceramic | 0.1 µF |
| C359 | F1H1E223A002 | Ceramic | 0.022 µF |
| C402,404 | F1H1H103A013 | Ceramic | 0.01 µF |
| C405 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C407 | F1H1H121A004 | Ceramic | 120 pF |
| C408 | F1H1C104A001 | Ceramic | 0.1 µF |
| C409 | F1H1E223A002 | Ceramic | 0.022 µF |
| C452,454 | F1H1H103A013 | Ceramic | 0.01 µF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C455 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C457 | F1H1H121A004 | Ceramic | 120 pF |
| C458 | F1H1C104A001 | Ceramic | 0.1 µF |
| C459 | F1H1E223A002 | Ceramic | 0.022 µF |
| C502,504 | F1H1H103A013 | Ceramic | 0.01 µF |
| C505 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C507 | F1H1H121A004 | Ceramic | 120 pF |
| C508 | F1H1C104A001 | Ceramic | 0.1 µF |
| C509 | F1H1E223A002 | Ceramic | 0.022 µF |
| C552,554 | F1H1H103A013 | Ceramic | 0.01 µF |
| C555 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C557 | F1H1H121A004 | Ceramic | 120 pF |
| C558 | F1H1C104A001 | Ceramic | 0.1 µF |
| C559 | F1H1E223A002 | Ceramic | 0.022 µF |
| C602,604 | F1H1H103A013 | Ceramic | 0.01 µF |
| C605 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C607 | F1H1H121A004 | Ceramic | 120 pF |
| C608 | F1H1C104A001 | Ceramic | 0.1 µF |
| C609 | F1H1E223A002 | Ceramic | 0.022 µF |
| C652,654 | F1H1H103A013 | Ceramic | 0.01 µF |
| C655 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C657 | F1H1H121A004 | Ceramic | 120 pF |
| C658 | F1H1C104A001 | Ceramic | 0.1 µF |
| C659 | F1H1E223A002 | Ceramic | 0.022 µF |
| C702,704 | F1H1H103A013 | Ceramic | 0.01 µF |
| C705 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C707 | F1H1H121A004 | Ceramic | 120 pF |
| C708 | F1H1C104A001 | Ceramic | 0.1 µF |
| C709 | F1H1E223A002 | Ceramic | 0.022 µF |
| C752,754 | F1H1H103A013 | Ceramic | 0.01 µF |
| C755 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C757 | F1H1H121A004 | Ceramic | 120 pF |
| C758 | F1H1C104A001 | Ceramic | 0.1 µF |
| C759 | F1H1E223A002 | Ceramic | 0.022 µF |
| C802,804 | F1H1H103A013 | Ceramic | 0.01 µF |
| C805 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C807 | F1H1H121A004 | Ceramic | 120 pF |
| C808 | F1H1C104A001 | Ceramic | 0.1 µF |
| C809 | F1H1E223A002 | Ceramic | 0.022 µF |
| C852,854 | F1H1H103A013 | Ceramic | 0.01 µF |
| C855 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C857 | F1H1H121A004 | Ceramic | 120 pF |
| C858 | F1H1C104A001 | Ceramic | 0.1 µF |
| C859 | F1H1E223A002 | Ceramic | 0.022 µF |
| C902,904 | F1H1H103A013 | Ceramic | 0.01 µF |
| C905 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C907 | F1H1H121A004 | Ceramic | 120 pF |
| C908 | F1H1C104A001 | Ceramic | 0.1 µF |
| C909 | F1H1E223A002 | Ceramic | 0.022 µF |
| C952,954 | F1H1H103A013 | Ceramic | 0.01 µF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C955 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C957 | F1H1H121A004 | Ceramic | 120 pF |
| C958 | F1H1C104A001 | Ceramic | 0.1 µF |
| C959 | F1H1E223A002 | Ceramic | 0.022 µF |
| L3-11 | G1C8R2J00002 | Coil | 8.2 µH |
| L13,14 | G1C8R2J00002 | Coil | 8.2 µH |
| L20-34 | G1C8R2J00002 | Coil | 8.2 µH |
| SW1 | YWSKHMPS | Special Switch | |
| SW2 | YWSSSS812B12 | Slide Switch | |
| SW3-5 | YWSSSS21212 | Slide Switch | |
| SW6 | YWSMS604E | Slide Switch | |
| SW7 | YWSSSS812B12 | Slide Switch | |
| X1 | YWCP12A16R00 | Crystal Oscillator | |
| X2 | CP12A9R8304 | Crystal Oscillator | |
| CN1 | YWB10BPHKS | 10-pin Connector | |
| CN2 | YWB9BPHKS | 9-pin Connector | |
| CN11 | YWB11BPHKS | 11-pin Connector | |
| CN12 | YWB8BPHKS | 8-pin Connector | |
| CN23 | YWB8BPHSM3TB | 8-pin Connector | |
| CN32 | YW533980990 | 11-pin Connector | |
| CN33 | YW533981090 | 12-pin Connector | |
| CN34 | YW533981290 | 14-pin Connector | |
| CN35 | YW533981390 | 15-pin Connector | |
| CN36 | YW533980990 | 11-pin Connector | |
| CN37 | YW533981090 | 12-pin Connector | |
| CN43 | YWB6BPHSM3TB | 6-pin Connector | |
| CN61 | YW533980790 | 7-pin Connector | |
| CN90 | YWXR2A4011N | Socket for IC6 | |
| CN91 | YWB8PVH | 8-pin Connector | |
| CN100 | YWB6PVH | 6-pin Connector | |
| CN101-103 | YW528081890 | 18-pin Connector | |
| CN104 | YW528083090 | 30-pin Connector | |
| CN201 | K1KA08A00109 | Connector | |
| CN202 | K1KA10A00053 | 10-pin Connector | |
| CN203 | YW71756432 | 12-pin Connector | |
| CN204 | YWP2325 | Connector | |
| CN251 | K1KA08A00109 | Connector | |
| CN252 | K1KA10A00053 | 10-pin Connector | |
| CN253 | YW71756432 | 12-pin Connector | |
| CN254 | YWP2325 | Connector | |
| CN301 | K1KA08A00109 | Connector | |
| CN302 | K1KA10A00053 | 10-pin Connector | |
| CN303 | YW71756432 | 12-pin Connector | |
| CN304 | YWP2325 | Connector | |
| CN351 | K1KA08A00109 | Connector | |
| CN352 | K1KA10A00053 | 10-pin Connector | |
| CN353 | YW71756432 | 12-pin Connector | |
| CN354 | YWP2325 | Connector | |
| CN401 | K1KA08A00109 | Connector | |
| CN402 | K1KA10A00053 | 10-pin Connector | |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| CN403 | YW71756432 | 12-pin Connector |
| CN404 | YWP2325 | Connector |
| CN451 | K1KA08A00109 | Connector |
| CN452 | K1KA10A00053 | 10-pin Connector |
| CN453 | YW71756432 | 12-pin Connector |
| CN454 | YWP2325 | Connector |
| CN501 | K1KA08A00109 | Connector |
| CN502 | K1KA10A00053 | 10-pin Connector |
| CN503 | YW71756432 | 12-pin Connector |
| CN504 | YWP2325 | Connector |
| CN551 | K1KA08A00109 | Connector |
| CN552 | K1KA10A00053 | 10-pin Connector |
| CN553 | YW71756432 | 12-pin Connector |
| CN554 | YWP2325 | Connector |
| CN601 | K1KA08A00109 | Connector |
| CN602 | K1KA10A00053 | 10-pin Connector |
| CN603 | YW71756432 | 12-pin Connector |
| CN604 | YWP2325 | Connector |
| CN651 | K1KA08A00109 | Connector |
| CN652 | K1KA10A00053 | 10-pin Connector |
| CN653 | YW71756432 | 12-pin Connector |
| CN654 | YWP2325 | Connector |
| CN701 | K1KA08A00109 | Connector |
| CN702 | K1KA10A00053 | 10-pin Connector |
| CN703 | YW71756432 | 12-pin Connector |
| CN704 | YWP2325 | Connector |
| CN751 | K1KA08A00109 | Connector |
| CN752 | K1KA10A00053 | 10-pin Connector |
| CN753 | YW71756432 | 12-pin Connector |
| CN754 | YWP2325 | Connector |
| CN801 | K1KA08A00109 | Connector |
| CN802 | K1KA10A00053 | 10-pin Connector |
| CN803 | YW71756432 | 12-pin Connector |
| CN804 | YWP2325 | Connector |
| CN851 | K1KA08A00109 | Connector |
| CN852 | K1KA10A00053 | 10-pin Connector |
| CN853 | YW71756432 | 12-pin Connector |
| CN854 | YWP2325 | Connector |
| CN901 | K1KA08A00109 | Connector |
| CN902 | K1KA10A00053 | 10-pin Connector |
| CN903 | YW71756432 | 12-pin Connector |
| CN904 | YWP2325 | Connector |
| CN951 | K1KA08A00109 | Connector |
| CN952 | K1KA10A00053 | 10-pin Connector |
| CN953 | YW71756432 | 12-pin Connector |
| CN954 | YWP2325 | Connector |
| BZ1 | L0DDEA000008 | Buzzer |
| BAT1 | YWVL2330-1HF | Storage Battery |
| E8 | L2007B12B5 | Wire Ass'y |
| E10 | YWA2QA0134A4 | Electrode |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| M76 | YWV2SA4397A3 | Mounting Angle |
| **SWITCH BOARD** | | |
| PCB9 (RTL) | YWJFS61EKZ2A | Printed Circuit Board Ass'y |
| IC1 | YWM141625AFU | IC |
| IC4 | YW74HC04ADTE | IC |
| IC5 | YWM141625AFU | IC |
| IC8 | YW74HC04ADTE | IC |
| IC9 | YWMVT85038 | IC |
| IC12 | YWM141625AFU | IC |
| IC15 | YW74HC04ADTE | IC |
| IC16 | YWM141625AFU | IC |
| IC19 | YW74HC04ADTE | IC |
| IC20 | YWMVT85038 | IC |
| IC26 | YW74HC04ADTE | IC |
| IC27,30 | YWM141625AFU | IC |
| IC33 | YW74HC04ADTE | IC |
| IC34 | MN65752H | IC |
| IC35-38 | 74HC157ADTE | IC |
| IC39 | YWMVT85038 | IC |
| IC42 | YWM141625AFU | IC |
| IC45 | YW74HC04ADTE | IC |
| IC46 | YWM141625AFU | IC |
| IC49 | YW74HC04ADTE | IC |
| IC50 | YWMVT85038 | IC |
| IC62-64 | YWNJM2244M | IC |
| IC65 | YWTC4W53FUL | IC |
| IC66 | YWNJM2244M | IC |
| IC67 | YWTC4W53FUL | IC |
| IC68 | C0ABBA000029 | IC |
| IC69 | YWM35060058 | IC |
| IC70 | 74HC157ADTE | IC |
| IC73 | YWTC7S04FUL | IC |
| IC75 | YW74HC32ADTE | IC |
| IC76,77 | YWTC4W53FUL | IC |
| IC78-85 | C1AB00000161 | IC |
| IC86 | CD22M3494MQ | IC |
| IC87,88 | 74HC4051DTE | IC |
| IC89 | YWTC4W53FUL | IC |
| IC90 | C1AB00000179 | IC |
| IC91-93 | 74HC138ADTE | IC |
| IC94,95 | YW74AC574DTE | IC |
| IC97 | YW74AC574DTE | IC |
| IC98 | YWM66220FP | IC |
| IC99 | YWK58257BM70 | IC |
| IC100 | YW74HC74ADTE | IC |
| IC101 | YWBR93LC66RF | IC |
| IC102 | YW38067MC255 | IC |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| IC103 | C0EBH0000052 | IC |
| IC104 | YW74HC04ADTE | IC |
| IC105 | YW74HC32ADTE | IC |
| IC107 | YWTC7SU04FUR | IC |
| IC108 | YWTC7S08FUL | IC |
| IC121,122 | YWTC7S04FUL | IC |
| IC123,124 | YW74HC04ADTE | IC |
| IC125 | YWNJM2229M | IC |
| IC127 | YWTC7S02FUL | IC |
| IC128 | YW74HC00ADTE | IC |
| IC130 | YWTC4W53FUL | IC |
| IC131 | YW157ADTE | IC |
| IC132 | YWTC4W53FUL | IC |
| IC133 | MC74AC32DTL | IC |
| IC134 | YW74AC574DTE | IC |
| IC135 | YW74HC32ADTE | IC |
| IC136 | YW74HC04ADTE | IC |
| IC137 | YW74AC574DTE | IC |
| IC138,139 | C1AB00000161 | IC |
| IC140-143 | YWN0KZ | LSI |
| IC144 | YW74AC574DTE | IC |
| IC145-150 | HM14265DJ68 | IC |
| IC151 | 74AC244ADTE | IC |
| IC157,163 | YWTC4W53FUL | IC |
| IC165 | C1AB00000179 | IC |
| IC167 | YWTC4W53FUL | IC |
| IC168 | 74HC4538ADTE | IC |
| IC169 | YW74HC74ADTE | IC |
| IC170 | YW74HC08DTE | IC |
| Q1 | 2SC2412K-T46 | Transistor |
| Q2 | IMZ1T9 | Transistor |
| Q3-8 | 2SC2412K-T46 | Transistor |
| Q9 | 2SA1037K-T47 | Transistor |
| Q10 | 2SC2412K-T46 | Transistor |
| Q11 | IMZ1T9 | Transistor |
| Q12-17 | 2SC2412K-T46 | Transistor |
| Q18 | 2SA1037K-T47 | Transistor |
| Q19,20 | B1CBBF000007 | Transistor |
| Q23 | 2SC2412K-T46 | Transistor |
| Q24 | IMZ1T9 | Transistor |
| Q25-30 | 2SC2412K-T46 | Transistor |
| Q31 | 2SA1037K-T47 | Transistor |
| Q32 | 2SC2412K-T46 | Transistor |
| Q33 | IMZ1T9 | Transistor |
| Q34-39 | 2SC2412K-T46 | Transistor |
| Q40 | 2SA1037K-T47 | Transistor |
| Q41,42 | B1CBBF000007 | Transistor |
| Q55-58 | 2SC2412K-T46 | Transistor |
| Q59 | 2SA1037K-T47 | Transistor |
| Q60 | IMZ1T9 | Transistor |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| Q61,62 | 2SC2412K-T46 | Transistor |
| Q63 | IMZ1T9 | Transistor |
| Q64-69 | 2SC2412K-T46 | Transistor |
| Q70 | 2SA1037K-T47 | Transistor |
| Q71,72 | B1CBBF000007 | Transistor |
| Q75 | 2SC2412K-T46 | Transistor |
| Q76 | IMZ1T9 | Transistor |
| Q77-82 | 2SC2412K-T46 | Transistor |
| Q83 | 2SA1037K-T47 | Transistor |
| Q84 | 2SC2412K-T46 | Transistor |
| Q85 | IMZ1T9 | Transistor |
| Q86-91 | 2SC2412K-T46 | Transistor |
| Q92 | 2SA1037K-T47 | Transistor |
| Q93,94 | B1CBBF000007 | Transistor |
| Q97,100 | 2SC2412K-T46 | Transistor |
| Q101,104 | 2SC2412K-T46 | Transistor |
| Q106 | B1GFCFAA0004 | Transistor |
| Q107-111 | 2SC2412K-T46 | Transistor |
| Q114 | B1GFCFAA0004 | Transistor |
| Q115-117 | 2SC2412K-T46 | Transistor |
| Q118 | 2SA1037K-T47 | Transistor |
| Q119,120 | 2SC2412K-T46 | Transistor |
| Q123,126 | 2SC2412K-T46 | Transistor |
| Q127,128 | 2SC2412K-T46 | Transistor |
| Q129 | IMZ1T9 | Transistor |
| Q131 | 2SC2412K-T46 | Transistor |
| Q133-136 | 2SC2412K-T46 | Transistor |
| Q137 | IMZ1T9 | Transistor |
| Q138-140 | 2SC2412K-T46 | Transistor |
| Q141 | IMZ1T9 | Transistor |
| Q142-160 | 2SC2412K-T46 | Transistor |
| Q161,162 | 2SA1037K-T47 | Transistor |
| Q163-165 | 2SC2412K-T46 | Transistor |
| Q169 | 2SA1037K-T47 | Transistor |
| Q170,171 | 2SC2412K-T46 | Transistor |
| Q172,173 | 2SA1037K-T47 | Transistor |
| Q174 | B1GFCFAA0004 | Transistor |
| Q175,176 | 2SC2412K-T46 | Transistor |
| Q177 | 2SA1037K-T47 | Transistor |
| Q178 | 2SC2412K-T46 | Transistor |
| Q179 | 2SA1037K-T47 | Transistor |
| Q180 | 2SC2412K-T46 | Transistor |
| Q181 | 2SA1037K-T47 | Transistor |
| Q182 | 2SC2412K-T46 | Transistor |
| Q183 | 2SA1037K-T47 | Transistor |
| Q184 | 2SC2412K-T46 | Transistor |
| Q185 | 2SA1037K-T47 | Transistor |
| Q186 | 2SC2412K-T46 | Transistor |
| Q187 | 2SA1037K-T47 | Transistor |
| Q188 | 2SC2412K-T46 | Transistor |

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| Q189 | 2SA1037K-T47 | Transistor |
| Q190 | 2SC2412K-T46 | Transistor |
| Q191 | 2SA1037K-T47 | Transistor |
| Q192 | 2SC2412K-T46 | Transistor |
| Q193 | 2SA1037K-T47 | Transistor |
| Q194 | 2SC2412K-T46 | Transistor |
| Q197 | 2SA1037K-T47 | Transistor |
| Q198 | 2SC2412K-T46 | Transistor |
| Q199-201 | 2SC2412K-T46 | Transistor |
| Q202 | 2SA1037K-T47 | Transistor |
| Q203,204 | 2SC2412K-T46 | Transistor |
| Q205 | 2SA1037K-T47 | Transistor |
| Q206 | 2SC2412K-T46 | Transistor |
| Q207 | 2SA1037K-T47 | Transistor |
| Q208 | 2SC2412K-T46 | Transistor |
| Q209 | 2SA1037K-T47 | Transistor |
| Q210 | 2SC2412K-T46 | Transistor |
| Q211 | 2SA1037K-T47 | Transistor |
| Q212 | 2SC2412K-T46 | Transistor |
| Q213 | 2SA1037K-T47 | Transistor |
| Q214 | 2SC2412K-T46 | Transistor |
| Q215,217 | 2SA1037K-T47 | Transistor |
| Q218 | 2SC2412K-T46 | Transistor |
| Q219 | 2SA1037K-T47 | Transistor |
| Q220 | B1GFCFAA0004 | Transistor |
| Q221-224 | B1CBBF000007 | Transistor |
| Q226,227 | B1CBBF000007 | Transistor |
| Q229 | 2SC2412K-T46 | Transistor |
| Q230 | 2SC2412K-T46 | Transistor |
| Q231-234 | B1CBBF000007 | Transistor |
| Q236,237 | B1CBBF000007 | Transistor |
| Q239-241 | 2SC2412K-T46 | Transistor |
| Q242,243 | 2SA1037K-T47 | Transistor |
| Q244 | B1GFCFAA0004 | Transistor |
| D1-4 | YWHVU359TRF | Diode |
| D9-12 | YWHVU359TRF | Diode |
| D17-20 | YWHVU359TRF | Diode |
| D25-28 | YWHVU359TRF | Diode |
| D38,39 | B0ADCC000003 | Diode |
| D47-51 | MA2Z372E0L | Diode |
| D53 | MA2Z372E0L | Diode |
| D56-59 | MA2Z372E0L | Diode |
| D62 | B0ADCC000003 | Diode |
| D63-67 | MA2Z372E0L | Diode |
| D69 | MA2Z372E0L | Diode |
| D72-75 | MA2Z372E0L | Diode |
| D79 | YWMA3X15300L | Diode |
| D82 | B0ADCC000003 | Diode |
| D85 | YWMA3X15300L | Diode |
| D86,87 | B0ADCC000003 | Diode |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R1-3 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R4,6 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R7 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R8 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R9 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R10 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R11 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R12 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R13 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R14 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R15-17 | YWR1220P242D | Metal | 2.4K ohms |
| R18 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R19 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R21 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R22 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R23 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R24 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R25 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R27 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R28 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R29 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R30 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R31 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R32 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R33,34 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R35 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W |
| R36 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R37 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R38,39 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R40 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R41 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R42 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R43 | YW2116620JT | Carbon | 62 ohms 1/10W |
| R45 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R46 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R47 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R48 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R49-51 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R52,54 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R55 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R56 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R57 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R58 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R59 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R60 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R61 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R62 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R63-65 | YWR1220P242D | Metal | 2.4K ohms |
| R66 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R67 | D0YDR0000013 | Carbon | 0 ohm 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R69 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R70,71 | YWR1220P242D | Metal | 2.4K ohms |
| R72 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R73 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R75 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R76 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R77 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R78 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R79 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R80 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R81,82 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R83 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W |
| R84 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R85 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R86,87 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R88 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R89 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R90 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R91 | YW2116620JT | Carbon | 62 ohms 1/10W |
| R93 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R94 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R95 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R96 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R97 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W |
| R98 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R99 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R100,101 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R102 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R103,104 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R105 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R106,107 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R108 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R109 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R110 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W |
| R111 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R112 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R113 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R114 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R118,119 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R120 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R121 | YF2116201JT | Carbon | 200 ohms 1/10W |
| R122 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R123 | YF2116201JT | Carbon | 200 ohms 1/10W |
| R124 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R125 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W |
| R126 | ERJ6GEYJ472V | Carbon | 4.7K ohms 1/16W |
| R127 | ERJ6GEYJ622 | Carbon | 6.2K ohms 1/10W |
| R128 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R129,130 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R133,134 | D0YDR0000013 | Carbon | 0 ohm 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R135 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R136-139 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R140 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R141 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R142 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R143 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R144 | ERJ6GEYJ221V | Carbon | 220 ohms 1/ |
| R145 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R146 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R147 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R150 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R151-153 | YWR1220P122D | Metal | 1.2K ohms |
| R154 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R155 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R157 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R158,159 | YWR1220P122D | Metal | 1.2K ohms |
| R160 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R161,163 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R164 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R165,166 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R167 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R168 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R169 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R170 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R171,172 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R173 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R174,175 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R176 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R177 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R178 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R179 | YW2116620JT | Carbon | 62 ohms 1/10W |
| R181 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R182 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R183 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R184 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R185-187 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R188 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R189 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R190 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R191 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R192 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R193 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R194 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R195 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R196 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R197 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W |
| R198 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R199 | YWR1220P122D | Metal | 1.2K ohms |
| R200,201 | YWR1220P242D | Metal | 2.4K ohms |
| R202 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R203 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R205 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R206,207 | YWR1220P122D | Metal | 1.2K ohms |
| R208 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R209,211 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R212 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R213,214 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R215 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R216 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R217 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R218 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R219,220 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R221 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R222,223 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R224 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R225 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R226 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R227 | YW2116620JT | Carbon | 62 ohms 1/10W |
| R229 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R230 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R231 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R232 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R233 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W |
| R234 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R235 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R236,237 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R238 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R239,240 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R241 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R242,243 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R244 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R245 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R246 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W |
| R247 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R248 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R249 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R250 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R251 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R252 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R253 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R254 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R255,256 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R257 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R258 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R259 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R260 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R261 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R262 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R274 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R275 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| R276,277 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R278-281 | YWR1220P242D | Metal | 2.4K ohms |
| R282-286 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R287,288 | YWR1220P242D | Metal | 2.4K ohms |
| R289,290 | YWR1220P122D | Metal | 1.2K ohms |
| R291 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R292 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R293 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R294 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R295 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R296-299 | YWR1220P122D | Metal | 1.2K ohms |
| R304 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R305 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R306,307 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R308 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R309 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R310 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R311 | YW2116620JT | Carbon | 62 ohms 1/10W |
| R312 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R315,316 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R317,319 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R320 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R321 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R322 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R323 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R324 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R326 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R327 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R330 | YWR1220P122D | Metal | 1.2K ohms |
| R331 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R332 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R334 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R335-337 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R338,340 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R341 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R342 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R343 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R344 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R345 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R346 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R347 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R348 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R349,350 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R352 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R353 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R355 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R356 | YWR1220P122D | Metal | 1.2K ohms |
| R358 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R359 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R361 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| R362 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W | R438 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R363 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R439 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R364 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R440 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R365 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R441 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R366 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W | R443 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R367 | YF2116511JT | Carbon | 510 ohms 1/10W | R444 | YF2116201JT | Carbon | 200 ohms 1/10W |
| R368 | YW2116620JT | Carbon | 62 ohms 1/10W | R445 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R369,370 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R446 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R371 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R447,449 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R372,373 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R451 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R374 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W | R452 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R375 | YF2116511JT | Carbon | 510 ohms 1/10W | R453 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R376 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W | R454 | YWR1220P333D | Metal | 33K ohms |
| R377 | YW2116620JT | Carbon | 62 ohms 1/10W | R455 | ERJ6GEYJ123V | Carbon | 12K ohms 1/10W |
| R379 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R456 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R380 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R457 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R381 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R458 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R382 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W | R459 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R383 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W | R460,461 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R384 | YF2116511JT | Carbon | 510 ohms 1/10W | R462 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W |
| R385 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R463 | YF2116511JT | Carbon | 510 ohms 1/10W |
| R386,387 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R464 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R388 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W | R465 | YW2116620JT | Carbon | 62 ohms 1/10W |
| R389,390 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R467 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R391 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W | R468 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R392,393 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R469 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R394 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W | R470 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W |
| R395 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R471-473 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R396 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W | R474,476 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R397 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R477 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R398 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R478 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R399 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W | R479 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R400 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R480 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R401-408 | YWR1220P242D | Metal | 2.4K ohms | R481,482 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R409-416 | YWR1220P122D | Metal | 1.2K ohms | R483 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R417 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R484 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W |
| R418 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W | R485 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R420 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R486 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R421 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R487,488 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R422 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W | R489 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R423-425 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R491 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R426,428 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W | R492,493 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R429 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R494 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R430 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W | R495 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R431 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R496 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R432 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R497,498 | ERJ6GEYJ221V | Carbon | 220 ohms 1/10W |
| R433,434 | ERJ6GEYJ101V | Carbon | 100 ohms | R499 | ERJ6GEYJ134 | Carbon | 130K ohms 1/10W |
| R435 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W | R500 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R436 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R501 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R437 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R502 | ERJ6GEYJ183V | Carbon | 18K ohms 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| R503 | YF2116363JT | Carbon | 36K ohms 1/10W | R595,596 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R504 | ERJ6GEYJ153V | Carbon | 15K ohms 1/10W | R597 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R506 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R598 | YF2116202JT | Carbon | 2K ohms 1/10W |
| R507 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R599 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R508,509 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R600 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R510 | ERJ6GEYJ393 | Carbon | 39K ohms 1/10W | R601 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R511 | YF2116511JT | Carbon | 510 ohms 1/10W | R602 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R512 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W | R603,604 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R513 | YW2116620JT | Carbon | 62 ohms 1/10W | R606 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R515 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R607 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R516 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R608 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R517 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R609 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R518 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W | R610 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R519 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W | R611 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R520 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R612 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R521 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R613 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R522,523 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R614 | ERJ6GEYJ203V | Carbon | 20K ohms 1/10W |
| R524 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W | R615,616 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R525,526 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R617 | ERJ6GEYJ622 | Carbon | 6.2K ohms 1/10W |
| R527 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W | R618,619 | ERJ6GEYJ122V | Carbon | 1.2K ohms 1/10W |
| R528,529 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R620,621 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W |
| R530 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W | R622,623 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R531 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R625 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R532 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W | R626 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R533 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R627,628 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R534 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R629 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R535 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W | R630 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R536 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R631,632 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R537-544 | YWR1220P242D | Metal | 2.4K ohms | R633,634 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R545-552 | YWR1220P122D | Metal | 1.2K ohms | R635 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R559 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R636 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R560,561 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W | R637 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R563 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R638 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R564 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R639-643 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R565 | YF2116202JT | Carbon | 2K ohms 1/10W | R644-646 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R566 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R647 | ERJ6GEYJ822V | Carbon | 8.2K ohms 1/10W |
| R567 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R648 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R568 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R649 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R569 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R650 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R570 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W | R651 | ERJ6GEYJ122V | Carbon | 1.2K ohms 1/10W |
| R571-583 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R652 | YF2116112JT | Carbon | 1.1K ohms 1/10W |
| R584 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R653,654 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W |
| R585,586 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W | R655 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R587 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R656,657 | YF2116201JT | Carbon | 200 ohms 1/10W |
| R588 | YF2116202JT | Carbon | 2K ohms 1/10W | R660 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R589 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R661-664 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R590 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R665 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W |
| R591,592 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R666 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R593 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W | R667 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R594 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R668 | RRJ6GEYJ561V | Carbon | 560 ohms 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| R670 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R760 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R671 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W | R761 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R672,673 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R762 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R674 | ERJ6GEYJ512V | Carbon | 5.1K ohms 1/10W | R763 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W |
| R675 | ERJ6GEYJ392V | Carbon | 3.9K ohms 1/10W | R765 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R677 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R766 | RRJ6GEYJ561V | Carbon | 560 ohms 1/10W |
| R679 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R767 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W |
| R680 | ERJ6GEYJ392V | Carbon | 3.9K ohms 1/10W | R768 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R681 | YF2116112JT | Carbon | 1.1K ohms 1/10W | R769 | YF2116201JT | Carbon | 200 ohms 1/10W |
| R682,683 | ERJ6GEYJ242 | Carbon | 2.4K ohms 1/10W | R770 | ERJ6GEYJ182V | Carbon | 1.8K ohms 1/10W |
| R684 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R771 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R685 | ERJ6GEYJ182V | Carbon | 1.8K ohms 1/10W | R772 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R686 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R774 | ERJ6GEYJ683V | Carbon | 68K ohms 1/10W |
| R687,688 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R775 | ERJ6GEYJ473V | Carbon | 47K ohms 1/10W |
| R689 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R776 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R690,691 | ERJ6GEYJ621 | Carbon | 620 ohms 1/10W | R777 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R692 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R778,780 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R693 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R781 | RRJ6GEYJ561V | Carbon | 560 ohms 1/10W |
| R694 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R782 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W |
| R695 | YF2116201JT | Carbon | 200 ohms 1/10W | R783 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R696 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R784 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R697 | YF2116201JT | Carbon | 200 ohms 1/10W | R785 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R698,699 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R786 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R700,701 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R851 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R723 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W | R852 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R724 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R853 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R726 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R854 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R727 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R855 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R728 | YF2116751JT | Carbon | 750 ohms 1/10W | R856 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R729 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R857 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R730 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R858 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R731 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R859 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R732 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R860 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R733 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R861 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R734 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R862 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R735 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R863 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R736 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R864 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R738 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R865 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R739 | RRJ6GEYJ561V | Carbon | 560 ohms 1/10W | R866 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R740 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W | R867 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R742,745 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R868 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R746 | YF2116511JT | Carbon | 510 ohms 1/10W | R869 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R750 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R870 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R751 | ERJ6GEYJ753V | Carbon | 75K ohms 1/10W | R871 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R753 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R872 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R754 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R873 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R755 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R874 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R757 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R875 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |
| R758 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R876 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R759 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R877 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| R878 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R967 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R879 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W | R968 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R880 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R969 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R881 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W | R970 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R882 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R971,972 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R883 | ERJ6GEYJ472V | Carbon | 4.7K ohms 1/16W | R973 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R884 | ERJ6GEYJ331V | Carbon | 330 ohms 1/10W | R974 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R885 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R975 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R886 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W | R976 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R887,888 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R977 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R889 | YF2116202JT | Carbon | 2K ohms 1/10W | R978 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R890 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R979 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R891 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R980 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R892,893 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R981 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R894,900 | ERJ6GEYJ684V | Carbon | 680K ohms 1/10W | R982 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R901-903 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R983 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R904,905 | ERJ6GEYJ273V | Carbon | 27K ohms 1/10W | R984 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R906 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W | R985 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R907,908 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R986 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R909 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R987 | YF2116112JT | Carbon | 1.1K ohms 1/10W |
| R929 | ERJ6GEYJ750 | Carbon | 75 ohms 1/10W | R988,989 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R930 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R990 | ERJ6GEYJ182V | Carbon | 1.8K ohms 1/10W |
| R931 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R991 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R932 | ERJ6GEYJ472V | Carbon | 4.7K ohms 1/16W | R992 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R933 | ERJ6GEYJ331V | Carbon | 330 ohms 1/10W | R993 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R934,935 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R994 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W |
| R936 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R995 | ERJ6GEYJ682V | Carbon | 6.8K ohms 1/10W |
| R940 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R996 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R942 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R997 | ERJ6GEYJ391V | Carbon | 390 ohms 1/10W |
| R944 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R998 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W |
| R945 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R999 | ERJ6GEYJ474V | Carbon | 470K ohms 1/10W |
| R946 | YF2116112JT | Carbon | 1.1K ohms 1/10W | R1000,1001 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R947,948 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R1002 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R949 | ERJ6GEYJ182V | Carbon | 1.8K ohms 1/10W | R1003 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R950,951 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R1004 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R952 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R1005 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R953 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W | R1006 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R954 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R1007 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R955 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1008,1009 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R956 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R1010 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R957 | ERJ6GEYJ223V | Carbon | 22K ohms 1/10W | R1011 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W |
| R958 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1012 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W |
| R959 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R1013 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R960 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R1014 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R961 | ERJ6GEYJ332V | Carbon | 3.3K ohms 1/10W | R1015 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R962 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R1020-1023 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R963 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W | R1024 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R964 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R1030-1034 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R965 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1035 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R966 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R1037-1040 | D0YDR0000013 | Carbon | 0 ohm 1/10W |

| REF. NO. | PART NO. | DESCRIPTION | | REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| R1045-1048 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R1186 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1054-1058 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R1187 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1060-1065 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1190 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1066 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R1191 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1067 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R1192 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1068 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1195 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1070 | ERJ6GEYJ473V | Carbon | 47K ohms 1/10W | R1196 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1071 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R1198 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1072-1079 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | R1199 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1080-1083 | ERJ6GEYJ100V | Carbon | 10 ohms 1/10W | R1201 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1084 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W | R1202 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1086,1087 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1204 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1088 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R1205 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1090 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R1206 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1091 | YF2116112JT | Carbon | 1.1K ohms 1/10W | R1207 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1092 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | R1209 | YF2116125JT | Carbon | 1.2M ohms 1/10W |
| R1093 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W | R1210 | ERJ6GEYJ105V | Carbon | 1M ohms 1/10W |
| R1094 | ERJ6GEYJ392V | Carbon | 3.9K ohms 1/10W | R1212,1214 | YF2116824JT | Carbon | 820K ohms 1/10W |
| R1095 | ERJ6GEYJ562V | Carbon | 5.6K ohms 1/10W | R1216,1218 | YF2116824JT | Carbon | 820K ohms 1/10W |
| R1096 | ERJ6GEYJ560V | Carbon | 56 ohms 1/10W | R1220,1222 | YF2116824JT | Carbon | 820K ohms 1/10W |
| R1098,1099 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1224,1226 | YF2116824JT | Carbon | 820K ohms 1/10W |
| R1100-1103 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R1228 | YF2116824JT | Carbon | 820K ohms 1/10W |
| R1105-1108 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | R1232 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R1109,1110 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1233 | YF2116244JT | Carbon | 240K ohms 1/10W |
| R1112,1113 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1236 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R1119 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1237 | ERJ6GEYJ103V | Carbon | 10K ohms 1/10W |
| R1128 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | R1238,1239 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W |
| R1129,1130 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R1240,1241 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R1134,1135 | D0YDR0000013 | Carbon | 0 ohm 1/10W | R2002 | D0YDR0000013 | Carbon | 0 ohm 1/10W |
| R1141 | D0YDR0000013 | Carbon | 0 ohm 1/10W | VR2,4 | EVM1DSW30B13 | Variable Resistor | 1K ohms |
| R1146 | ERJ6GEYJ100V | Carbon | 10 ohms 1/10W | VR6,8 | EVM1DSW30B13 | Variable Resistor | 1K ohms |
| R1147 | ERJ6GEYJ272V | Carbon | 2.7K ohms 1/10W | VR9,12 | EVM1DSW30B13 | Variable Resistor | 1K ohms |
| R1148,1150 | D0YDR0000013 | Carbon | 0 ohm 1/10W | VR14,16 | EVM1DSW30B13 | Variable Resistor | 1K ohms |
| R1151,1152 | D0YDR0000013 | Carbon | 0 ohm 1/10W | VR18,20 | EVM1DSW30B13 | Variable Resistor | 1K ohms |
| R1154 | D0YDR0000013 | Carbon | 0 ohm 1/10W | VR22,23 | EVM1DSW30BY2 | Variable Resistor | |
| R1156,1157 | ERJ6GEYJ100V | Carbon | 10 ohms 1/10W | VR25-32 | EVM1DSW30BY2 | Variable Resistor | |
| R1160-1162 | D0YDR0000013 | Carbon | 0 ohm 1/10W | VR33-36 | EVM1DSW30B13 | Variable Resistor | 1K ohms |
| R1164 | ERJ6GEYJ100V | Carbon | 10 ohms 1/10W | VR37 | EVM1DSW30B14 | Variable Resistor | 10K ohms |
| R1165-1167 | ERJ6GEYJ220V | Carbon | 22 ohms 1/10W | VR39 | EVM1DSW30B54 | Variable Resistor | 50K ohms |
| R1168 | ERJ6GEYJ331V | Carbon | 330 ohms 1/10W | VR40 | EVM1DSW30B15 | Variable Resistor | 100K ohms |
| R1169 | ERJ6GEYJ104V | Carbon | 100K ohms 1/10W | Z141-143 | EXBV8V101J | Block Resistor | |
| R1170 | ERJ6GEYJ224V | Carbon | 220K ohms 1/10W | Z144,145 | EXBV8V100J | Block Resistor | |
| R1171-1173 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | Z146-151 | EXBV8V101J | Block Resistor | |
| R1174,1175 | ERJ6GEYJ101V | Carbon | 100 ohms 1/10W | Z152-157 | EXBV8V103J | Block Resistor | |
| R1177 | D0YDR0000013 | Carbon | 0 ohm 1/10W | Z158-161 | EXBV8V680J | Block Resistor | |
| R1179 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | Z162-177 | EXBV8V101J | Block Resistor | |
| R1180 | ERJ6GEYJ152V | Carbon | 1.5K ohms 1/10W | Z178-209 | EXBV8V680J | Block Resistor | |
| R1181 | ERJ6GEYJ102V | Carbon | 1K ohms 1/10W | Z210-243 | EXBV8V101J | Block Resistor | |
| R1183 | ERJ6GEYJ474V | Carbon | 470K ohms 1/10W | Z244 | EXBV8V103J | Block Resistor | |
| R1184,1185 | ERJ6GEYJ222V | Carbon | 2.2K ohms 1/10W | Z245-248 | EXBV8V101J | Block Resistor | |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C1 | F1J1H220A410 | Ceramic | 22 pF |
| C2 | F1J1H510A410 | Ceramic | 51 pF |
| C3 | F1J1H330A410 | Ceramic | 33 pF |
| C4 | F1J1H220A410 | Ceramic | 22 pF |
| C6 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C7 | YF400104FZT | Ceramic | 0.1 µF |
| C8 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C9 | YF400104FZT | Ceramic | 0.1 µF |
| C10 | F1J1C105A004 | Ceramic | 1 µF |
| C11 | YF400104FZT | Ceramic | 0.1 µF |
| C12,13 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C14 | YF400104FZT | Ceramic | 0.1 µF |
| C15 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C16,20 | YF400104FZT | Ceramic | 0.1 µF |
| C21 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C22,23 | YF400104FZT | Ceramic | 0.1 µF |
| C25-27 | YF400104FZT | Ceramic | 0.1 µF |
| C28 | F1J1H560A410 | Ceramic | 56 pF |
| C30 | YF400104FZT | Ceramic | 0.1 µF |
| C31 | F1J1H102A400 | Ceramic | 1000 pF |
| C32 | YF400104FZT | Ceramic | 0.1 µF |
| C33 | F1J1H121A410 | Ceramic | 120 pF |
| C35,36 | YF400104FZT | Ceramic | 0.1 µF |
| C37 | YF400223XKT | Ceramic | 0.022 µF |
| C38 | F1J1H102A400 | Ceramic | 1000 pF |
| C39 | F1J1H220A410 | Ceramic | 22 pF |
| C40 | F1J1H510A410 | Ceramic | 51 pF |
| C41 | F1J1H330A410 | Ceramic | 33 pF |
| C42 | F1J1H220A410 | Ceramic | 22 pF |
| C44 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C45 | YF400104FZT | Ceramic | 0.1 µF |
| C46 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C47 | YF400104FZT | Ceramic | 0.1 µF |
| C48 | F1J1C105A004 | Ceramic | 1 µF |
| C49,50 | YF400104FZT | Ceramic | 0.1 µF |
| C51 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C52 | YF400104FZT | Ceramic | 0.1 µF |
| C53 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C54 | YF400104FZT | Ceramic | 0.1 µF |
| C57 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C58 | YF400104FZT | Ceramic | 0.1 µF |
| C59 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C60,61 | YF400104FZT | Ceramic | 0.1 µF |
| C62 | F1J1C105A004 | Ceramic | 1 µF |
| C63-65 | YF400104FZT | Ceramic | 0.1 µF |
| C66 | F1J1H560A410 | Ceramic | 56 pF |
| C68 | YF400104FZT | Ceramic | 0.1 µF |
| C69 | F1J1H102A400 | Ceramic | 1000 pF |
| C70 | YF400104FZT | Ceramic | 0.1 µF |
| C71 | F1J1H121A410 | Ceramic | 120 pF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C73 | YF400104FZT | Ceramic | 0.1 µF |
| C74 | YF400104FZT | Ceramic | 0.1 µF |
| C75 | YF400223XKT | Ceramic | 0.022 µF |
| C76 | F1J1H102A400 | Ceramic | 1000 pF |
| C77 | YW400393XKT | Ceramic | 0.039 µF |
| C78 | YW400102CHJT | Ceramic | 1000 pF |
| C80,82 | F1J1H390A410 | Ceramic | 39 pF |
| C83 | F1J1H331A410 | Ceramic | 330 pF |
| C84 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C85 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C86-96 | YF400104FZT | Ceramic | 0.1 µF |
| C97 | YW400393XKT | Ceramic | 0.039 µF |
| C98 | YW400102CHJT | Ceramic | 1000 pF |
| C100 | MCUV1H222KBN | Ceramic | 2200 pF |
| C101 | F1J1H331A410 | Ceramic | 330 pF |
| C102 | F1J1H390A410 | Ceramic | 39 pF |
| C103 | F1J1H390A410 | Ceramic | 39 pF |
| C105-118 | YF400104FZT | Ceramic | 0.1 µF |
| C120,121 | EEVHB0J101P | Electrolytic | 100 µF 6.3V |
| C132-134 | YF400104FZT | Ceramic | 0.1 µF |
| C135-137 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C138 | F1J1H220A410 | Ceramic | 22 pF |
| C139 | F1J1H510A410 | Ceramic | 51 pF |
| C140 | F1J1H330A410 | Ceramic | 33 pF |
| C141 | F1J1H220A410 | Ceramic | 22 pF |
| C143 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C144 | YF400104FZT | Ceramic | 0.1 µF |
| C145 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C146 | YF400104FZT | Ceramic | 0.1 µF |
| C147 | F1J1C105A004 | Ceramic | 1 µF |
| C150 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C151 | YF400104FZT | Ceramic | 0.1 µF |
| C152 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C153 | YF400104FZT | Ceramic | 0.1 µF |
| C155 | F1J1H331A410 | Ceramic | 330 pF |
| C156 | YF400120CHJT | Ceramic | 12 pF |
| C157 | YF400104FZT | Ceramic | 0.1 µF |
| C158 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C159,160 | YF400104FZT | Ceramic | 0.1 µF |
| C161 | MCUV1H222KBN | Ceramic | 2200 pF |
| C162,164 | YF400104FZT | Ceramic | 0.1 µF |
| C165 | F1J1H560A410 | Ceramic | 56 pF |
| C167 | YF400104FZT | Ceramic | 0.1 µF |
| C168 | F1J1H102A400 | Ceramic | 1000 pF |
| C169 | YF400104FZT | Ceramic | 0.1 µF |
| C170 | F1J1H121A410 | Ceramic | 120 pF |
| C172,173 | YF400104FZT | Ceramic | 0.1 µF |
| C174 | YF400223XKT | Ceramic | 0.022 µF |
| C175 | F1J1H102A400 | Ceramic | 1000 pF |
| C176 | F1J1H220A410 | Ceramic | 22 pF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C177 | F1J1H510A410 | Ceramic | 51 pF |
| C178 | F1J1H330A410 | Ceramic | 33 pF |
| C179 | F1J1H220A410 | Ceramic | 22 pF |
| C181 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C182 | YF400104FZT | Ceramic | 0.1 µF |
| C183 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C184 | YF400104FZT | Ceramic | 0.1 µF |
| C185 | F1J1C105A004 | Ceramic | 1 µF |
| C188 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C189 | YF400104FZT | Ceramic | 0.1 µF |
| C190 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C191 | YF400104FZT | Ceramic | 0.1 µF |
| C193 | F1J1H331A410 | Ceramic | 330 pF |
| C194 | YF400120CHJT | Ceramic | 12 pF |
| C195 | YF400104FZT | Ceramic | 0.1 µF |
| C196 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C197,198 | YF400104FZT | Ceramic | 0.1 µF |
| C199 | F1J1H331A410 | Ceramic | 330 pF |
| C200,201 | ECUV1H103KBN | Ceramic | 0.01 µF |
| C203 | F1J1H560A410 | Ceramic | 56 pF |
| C205 | YF400104FZT | Ceramic | 0.1 µF |
| C206 | F1J1H102A400 | Ceramic | 1000 pF |
| C207 | YF400104FZT | Ceramic | 0.1 µF |
| C208 | F1J1H121A410 | Ceramic | 120 pF |
| C210,211 | YF400104FZT | Ceramic | 0.1 µF |
| C212 | YF400223XKT | Ceramic | 0.022 µF |
| C213 | F1J1H102A400 | Ceramic | 1000 pF |
| C214 | YW400393XKT | Ceramic | 0.039 µF |
| C215 | YW400102CHJT | Ceramic | 100 pF |
| C217,219 | F1J1H390A410 | Ceramic | 39 pF |
| C220,221 | F1J1H331A410 | Ceramic | 330 pF |
| C222 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C223-233 | YF400104FZT | Ceramic | 0.1 µF |
| C234 | YW400393XKT | Ceramic | 0.039 µF |
| C235 | YW400102CHJT | Ceramic | 1000 pF |
| C237 | YF400120CHJT | Ceramic | 12 pF |
| C238 | F1J1H331A410 | Ceramic | 330 pF |
| C239,240 | F1J1H390A410 | Ceramic | 39 pF |
| C242-249 | YF400104FZT | Ceramic | 0.1 µF |
| C265 | YF400104FZT | Ceramic | 0.1 µF |
| C266 | F1J1H121A410 | Ceramic | 120 pF |
| C267 | YF400104FZT | Ceramic | 0.1 µF |
| C268 | YF400223XKT | Ceramic | 0.022 µF |
| C269 | F1J1H102A400 | Ceramic | 1000 pF |
| C271 | F1J1H331A410 | Ceramic | 330 pF |
| C272 | F1J1C105A004 | Ceramic | 1 µF |
| C273 | F1J1H331A410 | Ceramic | 330 pF |
| C275,276 | YF400104FZT | Ceramic | 0.1 µF |
| C277,279 | F1J1H331A410 | Ceramic | 330 pF |
| C280 | F1J1H560A410 | Ceramic | 56 pF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C282 | YF400104FZT | Ceramic | 0.1 µF |
| C283 | F1J1H102A400 | Ceramic | 1000 pF |
| C284 | YF400104FZT | Ceramic | 0.1 µF |
| C286 | F1J1H220A410 | Ceramic | 22 pF |
| C287 | F1J1H510A410 | Ceramic | 51 pF |
| C288 | F1J1H330A410 | Ceramic | 33 pF |
| C289 | F1J1H220A410 | Ceramic | 22 pF |
| C291 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C292 | YF400104FZT | Ceramic | 0.1 µF |
| C293 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C294 | YF400104FZT | Ceramic | 0.1 µF |
| C295 | F1J1C105A004 | Ceramic | 1 µF |
| C296 | YF400104FZT | Ceramic | 0.1 µF |
| C298 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C299 | YF400104FZT | Ceramic | 0.1 µF |
| C300 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C301 | YF400104FZT | Ceramic | 0.1 µF |
| C302 | YF426220CHJS | Ceramic | 22 pF |
| C303 | F1J1H331A410 | Ceramic | 330 pF |
| C304 | YF400120CHJT | Ceramic | 12 pF |
| C305 | YF400104FZT | Ceramic | 0.1 µF |
| C306 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C307 | YF400104FZT | Ceramic | 0.1 µF |
| C308 | F1J1H220A410 | Ceramic | 22 pF |
| C309 | F1J1H510A410 | Ceramic | 51 pF |
| C310 | F1J1H330A410 | Ceramic | 33 pF |
| C311 | F1J1H220A410 | Ceramic | 22 pF |
| C313 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C314 | YF400104FZT | Ceramic | 0.1 µF |
| C315 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C316 | YF400104FZT | Ceramic | 0.1 µF |
| C317 | F1J1C105A004 | Ceramic | 1 µF |
| C318 | MCUV1E823KBN | Ceramic | 0.082 µF |
| C319 | MCUV1H222KBN | Ceramic | 2200 pF |
| C320 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C321 | YF400104FZT | Ceramic | 0.1 µF |
| C322 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C323,327 | YF400104FZT | Ceramic | 0.1 µF |
| C328 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C329,330 | YF400104FZT | Ceramic | 0.1 µF |
| C332 | F1J1H331A410 | Ceramic | 330 pF |
| C333 | YF400120CHJT | Ceramic | 12 pF |
| C334 | F1J1H331A410 | Ceramic | 330 pF |
| C335 | F1J1H560A410 | Ceramic | 56 pF |
| C337 | YF400104FZT | Ceramic | 0.1 µF |
| C338 | F1J1H102A400 | Ceramic | 1000 pF |
| C339 | YF400104FZT | Ceramic | 0.1 µF |
| C340 | F1J1H121A410 | Ceramic | 120 pF |
| C342,343 | YF400104FZT | Ceramic | 0.1 µF |
| C344 | YF400223XKT | Ceramic | 0.022 µF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C345 | F1J1H102A400 | Ceramic | 1000 pF |
| C346,347 | YF400104FZT | Ceramic | 0.1 µF |
| C348 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C349 | YF400104FZT | Ceramic | 0.1 µF |
| C350 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C351 | YF400104FZT | Ceramic | 0.1 µF |
| C352 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C353-358 | YF400104FZT | Ceramic | 0.1 µF |
| C359 | YW400393XKT | Ceramic | 0.039 µF |
| C360 | YW400102CHJT | Ceramic | 1000 pF |
| C362,364 | F1J1H390A410 | Ceramic | 39 pF |
| C365 | F1J1H331A410 | Ceramic | 330 pF |
| C367 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C368-378 | YF400104FZT | Ceramic | 0.1 µF |
| C379 | YW400393XKT | Ceramic | 0.039 µF |
| C380 | YW400102CHJT | Ceramic | 1000 pF |
| C382 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C383 | F1J1H331A410 | Ceramic | 330 pF |
| C384,385 | F1J1H390A410 | Ceramic | 39 pF |
| C414 | F1J1H331A410 | Ceramic | 330 pF |
| C415 | YF400120CHJT | Ceramic | 12 pF |
| C416 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C417 | MCUV1H222KBN | Ceramic | 2200 pF |
| C418 | F1J1H331A410 | Ceramic | 330 pF |
| C419 | YF400120CHJT | Ceramic | 12 pF |
| C420 | F1J1H220A410 | Ceramic | 22 pF |
| C421 | F1J1H510A410 | Ceramic | 51 pF |
| C422 | F1J1H330A410 | Ceramic | 33 pF |
| C423 | F1J1H220A410 | Ceramic | 22 pF |
| C425 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C426 | YF400104FZT | Ceramic | 0.1 µF |
| C427 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C428 | YF400104FZT | Ceramic | 0.1 µF |
| C429 | F1J1C105A004 | Ceramic | 1 µF |
| C430,431 | F1J1H331A410 | Ceramic | 330 pF |
| C432 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C433 | YF400104FZT | Ceramic | 0.1 µF |
| C434 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C435,439 | YF400104FZT | Ceramic | 0.1 µF |
| C440 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C441,442 | YF400104FZT | Ceramic | 0.1 µF |
| C444 | YF400120CHJT | Ceramic | 12 pF |
| C445 | F1J1C474A051 | Ceramic | 0.47 µF |
| C446 | MCUV1H222KBN | Ceramic | 2200 pF |
| C447 | F1J1H560A410 | Ceramic | 56 pF |
| C449 | YF400104FZT | Ceramic | 0.1 µF |
| C450 | F1J1H102A400 | Ceramic | 1000 pF |
| C451 | YF400104FZT | Ceramic | 0.1 µF |
| C452 | F1J1H121A410 | Ceramic | 120 pF |
| C454,455 | YF400104FZT | Ceramic | 0.1 µF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C456 | YF400223XKT | Ceramic | 0.022 µF |
| C457 | F1J1H102A400 | Ceramic | 1000 pF |
| C458 | F1J1H220A410 | Ceramic | 22 pF |
| C459 | F1J1H510A410 | Ceramic | 51 pF |
| C460 | F1J1H330A410 | Ceramic | 33 pF |
| C461 | F1J1H220A410 | Ceramic | 22 pF |
| C463 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C464 | YF400104FZT | Ceramic | 0.1 µF |
| C465 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C466 | YF400104FZT | Ceramic | 0.1 µF |
| C467 | F1J1C105A004 | Ceramic | 1 µF |
| C470 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C471 | YF400104FZT | Ceramic | 0.1 µF |
| C472 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C473,475 | YF400104FZT | Ceramic | 0.1 µF |
| C476,477 | YF400104FZT | Ceramic | 0.1 µF |
| C478 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C479,480 | YF400104FZT | Ceramic | 0.1 µF |
| C482,484 | F1J1H331A410 | Ceramic | 330 pF |
| C485 | F1J1H560A410 | Ceramic | 56 pF |
| C487 | YF400104FZT | Ceramic | 0.1 µF |
| C488 | F1J1H102A400 | Ceramic | 1000 pF |
| C489 | YF400104FZT | Ceramic | 0.1 µF |
| C490 | F1J1H121A410 | Ceramic | 120 pF |
| C492,493 | YF400104FZT | Ceramic | 0.1 µF |
| C494 | YF400223XKT | Ceramic | 0.022 µF |
| C495 | F1J1H102A400 | Ceramic | 1000 pF |
| C496 | YW400393XKT | Ceramic | 0.039 µF |
| C497 | YW400102CHJT | Ceramic | 1000 pF |
| C499,501 | F1J1H390A410 | Ceramic | 39 pF |
| C502 | F1J1H331A410 | Ceramic | 330 pF |
| C503 | YF400104FZT | Ceramic | 0.1 µF |
| C504 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C505-515 | YF400104FZT | Ceramic | 0.1 µF |
| C516 | YW400393XKT | Ceramic | 0.039 µF |
| C517 | YW400102CHJT | Ceramic | 1000 pF |
| C519 | YF400104FZT | Ceramic | 0.1 µF |
| C520 | F1J1H331A410 | Ceramic | 330 pF |
| C521,522 | F1J1H390A410 | Ceramic | 39 pF |
| C558,559 | ECUV1H103KBN | Ceramic | 0.01 µF |
| C571,573 | YF400104FZT | Ceramic | 0.1 µF |
| C574 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C576 | MCUV1H240JCN | Ceramic | 24 pF |
| C577 | F1J1H361A002 | Ceramic | 360 pF |
| C580 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C582 | EEVHB0J470R | Electrolytic | 47 µF 6.3V |
| C583 | EEVHB0J101P | Electrolytic | 100 µF 6.3V |
| C585 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C598 | F1J1H331A410 | Ceramic | 330 pF |
| C615 | MCUV1H240JCN | Ceramic | 24 pF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C610,612 | YF400104FZT | Ceramic | 0.1 µF |
| C614 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C616 | F1J1H361A002 | Ceramic | 360 pF |
| C617,618 | YF400104FZT | Ceramic | 0.1 µF |
| C620-624 | EEVHB1C100R | Electrolytic | 10 µF 16V |
| C627,628 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C629 | EEVHB0J470R | Electrolytic | 47 µF 6.3V |
| C630 | EEVHB0J101P | Electrolytic | 100 µF 6.3V |
| C631,632 | YF400104FZT | Ceramic | 0.1 µF |
| C634-636 | EEVHB1C100R | Electrolytic | 10 µF 16V |
| C637 | YF400104FZT | Ceramic | 0.1 µF |
| C638 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C639 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C640 | YF400104FZT | Ceramic | 0.1 µF |
| C641 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C642,645 | YF400104FZT | Ceramic | 0.1 µF |
| C646 | YF400104FZT | Ceramic | 0.1 µF |
| C647 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C650 | EEVHB0J470R | Electrolytic | 47 µF 6.3V |
| C653,654 | YF400104FZT | Ceramic | 0.1 µF |
| C655 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C656,657 | YF400104FZT | Ceramic | 0.1 µF |
| C658 | F1J1C105A004 | Ceramic | 1 µF |
| C659 | F1J1H472A400 | Ceramic | 4700 pF |
| C660 | ECUV1H103KBN | Ceramic | 0.01 µF |
| C661 | YF400471CHJT | Ceramic | 470 pF |
| C662,663 | F1J1H150A410 | Ceramic | 15 pF |
| C664,665 | YF400104FZT | Ceramic | 0.1 µF |
| C685,686 | YF400104FZT | Ceramic | 0.1 µF |
| C687 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C688 | YF400104FZT | Ceramic | 0.1 µF |
| C689 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C690 | F1J1H150A410 | Ceramic | 15 pF |
| C691 | F1J1H220A410 | Ceramic | 22 pF |
| C692 | F1J1H510A410 | Ceramic | 51 pF |
| C693 | F1J1H330A410 | Ceramic | 33 pF |
| C697 | EEVHB0J101P | Electrolytic | 100 µF 6.3V |
| C698 | F1J1H151A410 | Ceramic | 150 pF |
| C702 | YF400430CHJT | Ceramic | 43 pF |
| C703 | YF400104FZT | Ceramic | 0.1 µF |
| C706 | MCUV1H240JCN | Ceramic | 24 pF |
| C707 | F1J1H361A002 | Ceramic | 360 pF |
| C710 | YF400104FZT | Ceramic | 0.1 µF |
| C713 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C714 | MCUV1H200JCN | Ceramic | 20 pF |
| C716,717 | YF400104FZT | Ceramic | 0.1 µF |
| C718 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C721,723 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C725,727 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C729,731 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C733,735 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C737,739 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C741,743 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C745,747 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C749,751 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C753 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C754 | YF400104FZT | Ceramic | 0.1 µF |
| C755 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C756-759 | YF400104FZT | Ceramic | 0.1 µF |
| C760 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C761 | YF400104FZT | Ceramic | 0.1 µF |
| C762 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C764-779 | YF400104FZT | Ceramic | 0.1 µF |
| C781-784 | YF400104FZT | Ceramic | 0.1 µF |
| C785 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C786,787 | YF400104FZT | Ceramic | 0.1 µF |
| C788 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C789 | YF400104FZT | Ceramic | 0.1 µF |
| C790 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C791 | YF400104FZT | Ceramic | 0.1 µF |
| C794 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C807,808 | F3H1C1060002 | Electrolytic | 10 µF 16V |
| C815,816 | YF400104FZT | Ceramic | 0.1 µF |
| C821,822 | YF400104FZT | Ceramic | 0.1 µF |
| C823 | F1J1H331A410 | Ceramic | 330 pF |
| C824 | EEVHB1C100R | Electrolytic | 10 µF 16V |
| C825 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C828 | F1J1H101A410 | Ceramic | 100 pF |
| C829 | YF400104FZT | Ceramic | 0.1 µF |
| C842 | F1J1H101A410 | Ceramic | 100 pF |
| C845 | EEVHB1C100R | Electrolytic | 10 µF 16V |
| C846 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C850,851 | YF400104FZT | Ceramic | 0.1 µF |
| C852 | F1J1H332A400 | Ceramic | 3300 pF |
| C853 | YW400152CHJT | Ceramic | 1500 pF |
| C854 | F1J1C105A004 | Ceramic | 1 µF |
| C855 | YF400104FZT | Ceramic | 0.1 µF |
| C856 | YF400470CHJT | Ceramic | 47 pF |
| C857 | YF400104FZT | Ceramic | 0.1 µF |
| C858 | F1J1H122A400 | Ceramic | 1200 pF |
| C859 | YF400104FZT | Ceramic | 0.1 µF |
| C860 | MCUV1H221JCN | Ceramic | 220 pF |
| C861,862 | YF400391CHJT | Ceramic | 390 pF |
| C863 | YW400102CHJT | Ceramic | 1000 pF |
| C864-867 | YF400104FZT | Ceramic | 0.1 µF |
| C868 | MCUV1H240JCN | Ceramic | 24 pF |
| C869 | F1J1H361A002 | Ceramic | 360 pF |
| C870 | F1J1H101A410 | Ceramic | 100 pF |
| C871 | MCUV1H240JCN | Ceramic | 24 pF |
| C872 | F1J1H361A002 | Ceramic | 360 pF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C873 | F1J1H101A410 | Ceramic | 100 pF |
| C874 | MCUV1H240JCN | Ceramic | 24 pF |
| C875 | F1J1H361A002 | Ceramic | 360 pF |
| C876 | F1J1H101A410 | Ceramic | 100 pF |
| C877 | MCUV1H240JCN | Ceramic | 24 pF |
| C878 | F1J1H361A002 | Ceramic | 360 pF |
| C879 | F1J1H101A410 | Ceramic | 100 pF |
| C882 | F1J1H560A410 | Ceramic | 56 pF |
| C883 | YF400104FZT | Ceramic | 0.1 µF |
| C884 | F1J1H102A400 | Ceramic | 1000 pF |
| C885 | YF400104FZT | Ceramic | 0.1 µF |
| C887 | F1J1H101A410 | Ceramic | 100 pF |
| C888 | YF400104FZT | Ceramic | 0.1 µF |
| C889 | MCUV1H240JCN | Ceramic | 24 pF |
| C890 | F1J1H361A002 | Ceramic | 360 pF |
| C891 | MCUV1H240JCN | Ceramic | 24 pF |
| C892 | F1J1H101A410 | Ceramic | 100 pF |
| C893 | F1J1H361A002 | Ceramic | 360 pF |
| C894,895 | YF400104FZT | Ceramic | 0.1 µF |
| C896 | F1J1H101A410 | Ceramic | 100 pF |
| C897 | MCUV1H240JCN | Ceramic | 24 pF |
| C898 | F1J1H361A002 | Ceramic | 360 pF |
| C899 | F1J1H101A410 | Ceramic | 100 pF |
| C900 | MCUV1H240JCN | Ceramic | 24 pF |
| C901 | F1J1H361A002 | Ceramic | 360 pF |
| C902 | F1J1H101A410 | Ceramic | 100 pF |
| C907 | YF400223XKT | Ceramic | 0.022 µF |
| C908 | YF400104FZT | Ceramic | 0.1 µF |
| C909 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C910,913 | YF400104FZT | Ceramic | 0.1 µF |
| C914,915 | YF400104FZT | Ceramic | 0.1 µF |
| C921-923 | EEVHB1H2R2R | Electrolytic | 2.2 µF 50V |
| C925,926 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| C927 | YF400104FZT | Ceramic | 0.1 µF |
| C928,929 | ECUV1H103KBN | Ceramic | 0.01 µF |
| C931 | YF400104FZT | Ceramic | 0.1 µF |
| C932 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C933 | F1J1C105A004 | Ceramic | 1 µF |
| C934,935 | F1J1H331A410 | Ceramic | 330 pF |
| C937,938 | F1J1H331A410 | Ceramic | 330 pF |
| C940 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C941 | MCUV1H222KBN | Ceramic | 2200 pF |
| C942 | F1J1H331A410 | Ceramic | 330 pF |
| C943 | YF400120CHJT | Ceramic | 12 pF |
| C944,945 | F1J1H331A410 | Ceramic | 330 pF |
| C946 | YF400120CHJT | Ceramic | 12 pF |
| C947 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C948 | MCUV1H222KBN | Ceramic | 2200 pF |
| C949 | F1J1H331A410 | Ceramic | 330 pF |
| C950 | YF400120CHJT | Ceramic | 12 pF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C951,952 | F1J1H331A410 | Ceramic | 330 pF |
| C953 | YF400120CHJT | Ceramic | 12 pF |
| C954 | F1J1C474A051 | Ceramic | 0.47 µF |
| C956 | MCUV1H222KBN | Ceramic | 2200 pF |
| C957,959 | F1J1H331A410 | Ceramic | 330 pF |
| C960 | F1J1H331A410 | Ceramic | 330 pF |
| C963-970 | YF400104FZT | Ceramic | 0.1 µF |
| C971,972 | ECUV1H103KBN | Ceramic | 0.01 µF |
| C980 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C981 | MCUV1H222KBN | Ceramic | 2200 pF |
| C982 | F1J1H331A410 | Ceramic | 330 pF |
| C983 | YF400120CHJT | Ceramic | 12 pF |
| C984,985 | F1J1H331A410 | Ceramic | 330 pF |
| C986 | YF400120CHJT | Ceramic | 12 pF |
| C987 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C988 | MCUV1H222KBN | Ceramic | 2200 pF |
| C989 | F1J1H331A410 | Ceramic | 330 pF |
| C990 | YF400120CHJT | Ceramic | 12 pF |
| C991,992 | F1J1H331A410 | Ceramic | 330 pF |
| C993 | YF400120CHJT | Ceramic | 12 pF |
| C994 | F1J1H102A400 | Ceramic | 1000 pF |
| C995-998 | EEVHB0J101P | Electrolytic | 100 µF 6.3V |
| C1000-1003 | EEVHB0J101P | Electrolytic | 100 µF 6.3V |
| C1017 | F1J1C154A048 | Ceramic | 0.15 µF |
| C1031,1033 | YF400104FZT | Ceramic | 0.1 µF |
| C1034 | YF400104FZT | Ceramic | 0.1 µF |
| C1036-1039 | YF400104FZT | Ceramic | 0.1 µF |
| C1042 | YF400104FZT | Ceramic | 0.1 µF |
| C1045 | F1J1H101A410 | Ceramic | 100 pF |
| C1046 | F1J1C105A004 | Ceramic | 1 µF |
| C1047 | YF400471CHJT | Ceramic | 470 pF |
| C1048 | YF400104FZT | Ceramic | 0.1 µF |
| C1049 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C1051 | YF400104FZT | Ceramic | 0.1 µF |
| C1052,1053 | F1J1C105A004 | Ceramic | 1 µF |
| C1054 | YF400104FZT | Ceramic | 0.1 µF |
| C1055 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C1056 | YF400104FZT | Ceramic | 0.1 µF |
| C1057,1059 | F1J1C105A004 | Ceramic | 1 µF |
| C1061 | YF400104FZT | Ceramic | 0.1 µF |
| C1062 | F1J1C105A004 | Ceramic | 1 µF |
| C1064 | F1J1C105A004 | Ceramic | 1 µF |
| C1066,1068 | F1J1C105A004 | Ceramic | 1 µF |
| C1070 | F1J1C105A004 | Ceramic | 1 µF |
| C1072 | F1J1C105A004 | Ceramic | 1 µF |
| C1074 | F1J1C105A004 | Ceramic | 1 µF |
| C1076 | F1J1H101A410 | Ceramic | 100 pF |
| C1100 | EEUFC1A471 | Electrolytic | 470 µF 10V |
| C1101-1109 | F1J1H220A410 | Ceramic | 22 pF |
| C1110 | MCUV1E104KBN | Ceramic | 0.1 µF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C1112 | YF400104FZT | Ceramic | 0.1 µF |
| C1114 | MCUV1E104KBN | Ceramic | 0.1 µF |
| C1115,1116 | YF400104FZT | Ceramic | 0.1 µF |
| CT1-4 | ECRJA010A11W | Trimmer Capacitor | |
| L1 | G1C220J00001 | Coil | 22 µH |
| L2 | G1C100J00001 | Coil | 10 µH |
| L3-5 | G1C8R2J00002 | Coil | 8.2 µH |
| L6 | G1C220J00001 | Coil | 22 µH |
| L7 | G1C100J00001 | Coil | 10 µH |
| L8-10 | G1C8R2J00002 | Coil | 8.2 µH |
| L11 | G1C5R6J00001 | Coil | 5.6 µH |
| L16 | G1C220J00001 | Coil | 22 µH |
| L17 | G1C100J00001 | Coil | 10 µH |
| L18-20 | G1C8R2J00002 | Coil | 8.2 µH |
| L21 | G1C220J00001 | Coil | 22 µH |
| L22 | G1C100J00001 | Coil | 10 µH |
| L23-25 | G1C8R2J00002 | Coil | 8.2 µH |
| L26 | G1C5R6J00001 | Coil | 5.6 µH |
| L30 | G1C220J00001 | Coil | 22 µH |
| L31 | G1C100J00001 | Coil | 10 µH |
| L32 | G1C8R2J00002 | Coil | 8.2 µH |
| L33 | G1C5R6J00001 | Coil | 5.6 µH |
| L34 | G1C8R2J00002 | Coil | 8.2 µH |
| L35 | G1C220J00001 | Coil | 22 µH |
| L36 | G1C100J00001 | Coil | 10 µH |
| L37-39 | G1C8R2J00002 | Coil | 8.2 µH |
| L40 | G1C5R6J00001 | Coil | 5.6 µH |
| L45 | G1C220J00001 | Coil | 22 µH |
| L46 | G1C100J00001 | Coil | 10 µH |
| L47-49 | G1C8R2J00002 | Coil | 8.2 µH |
| L50 | G1C220J00001 | Coil | 22 µH |
| L51 | G1C100J00001 | Coil | 10 µH |
| L52-54 | G1C8R2J00002 | Coil | 8.2 µH |
| L55 | G1C5R6J00001 | Coil | 5.6 µH |
| L64 | G1C8R2J00002 | Coil | 8.2 µH |
| L65 | G1C560J00002 | Coil | 56 µH |
| L66 | G1C3R9J00002 | Coil | 3.9 µH |
| L72 | G1C8R2J00002 | Coil | 8.2 µH |
| L73 | G1C560J00002 | Coil | 56 µH |
| L74 | G1C3R9J00002 | Coil | 3.9 µH |
| L75-77 | G1C8R2J00002 | Coil | 8.2 µH |
| L80 | G1C220J00001 | Coil | 22 µH |
| L81 | G1C100J00001 | Coil | 10 µH |
| L82 | G1C560J00002 | Coil | 56 µH |
| L83 | G1C3R9J00002 | Coil | 3.9 µH |
| L85 | G1C5R6J00001 | Coil | 5.6 µH |
| L87,88 | G1C8R2J00002 | Coil | 8.2 µH |
| L89 | G1C5R6J00001 | Coil | 5.6 µH |
| L90,94 | G1C8R2J00002 | Coil | 8.2 µH |
| L95 | G1C560J00002 | Coil | 56 µH |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| L96 | G1C3R9J00002 | Coil | 3.9 µH |
| L97 | G1C560J00002 | Coil | 56 µH |
| L98 | G1C3R9J00002 | Coil | 3.9 µH |
| L99 | G1C560J00002 | Coil | 56 µH |
| L100 | G1C3R9J00002 | Coil | 3.9 µH |
| L101 | G1C560J00002 | Coil | 56 µH |
| L102 | G1C3R9J00002 | Coil | 3.9 µH |
| L103 | G1C560J00002 | Coil | 56 µH |
| L104 | G1C3R9J00002 | Coil | 3.9 µH |
| L105 | G1C560J00002 | Coil | 56 µH |
| L106 | G1C3R9J00002 | Coil | 3.9 µH |
| L107 | G1C560J00002 | Coil | 56 µH |
| L108 | G1C3R9J00002 | Coil | 3.9 µH |
| L109 | G1C560J00002 | Coil | 56 µH |
| L110 | G1C3R9J00002 | Coil | 3.9 µH |
| L111,112 | G1C8R2J00002 | Coil | 8.2 µH |
| L113,115 | G1C5R6J00001 | Coil | 5.6 µH |
| L116-119 | EIC4EJ011E | Coil | |
| L120 | G1C5R6J00001 | Coil | 5.6 µH |
| L121-124 | EIC4EJ011E | Coil | |
| L125-133 | G1C5R6J00001 | Coil | 5.6 µH |
| L134 | G1C8R2J00002 | Coil | 8.2 µH |
| L135 | G1C5R6J00001 | Coil | 5.6 µH |
| SW1 | YWSSSS812B12 | Slide Switch | |
| SW2 | YWSMS604E | Slide Switch | |
| X1-4 | H0J177500007 | Crystal Oscillator | |
| X6-9 | H0J177500007 | Crystal Oscillator | |
| X12 | YWAT514R43 | Crystal Oscillator | |
| X15 | H2D800400003 | Oscillator | |
| X16 | YTCSB503T2 | Crystal Oscillator | |
| X17 | H0J177500007 | Crystal Oscillator | |
| X18 | H0J270500003 | Crystal Oscillator | |
| X21 | H0J177500007 | Crystal Oscillator | |
| X22 | H0J270500003 | Crystal Oscillator | |
| CF1-16 | YWBLM21A601T | LC Filter | |
| CN21 | YW528082690 | 26-pin Connector | |
| CN51 | YW528081890 | 18-pin Connector | |
| CN100 | YWB6PVH | 6-pin Connector | |
| CN101-103 | YW528081890 | 18-pin Connector | |
| CN104 | YW528083090 | 30-pin Connector | |
| TP1-4 | YWRCT2125TPV | Test-pin | |
| TP6-9 | YWRCT2125TPV | Test-pin | |
| TP28-30 | YWRCT2125TPV | Test-pin | |
| TP32,34 | YWRCT2125TPV | Test-pin | |
| TP35-39 | YWRCT2125TPV | Test-pin | |
| TP41,42 | YWRCT2125TPV | Test-pin | |
| TP50-54 | YWRCT2125TPV | Test-pin | |
| E10 | YWA2QA0134A4 | Electrode | |
| M78 | YWX480WB01B | Cushion | |

## DATA MULTIPLEX BOARD

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| PCB10 (RTL) | YWVPB61EKY1A | Printed Circuit Board Ass'y | |
| IC1 | C1ZBZ0001170 | Custom IC | |
| Q1,2 | B1GBCFJJ0010 | Transistor | |
| Q3 | IMZ1T9 | Transistor | |
| Q4 | B1GFCFAA0004 | Transistor | |
| R1,2 | ERJ3GEYJ152V | Carbon | 1.5K ohms 1/16W |
| R3 | ERJ3GEYJ680V | Carbon | 68 ohms 1/16W |
| R5 | ERJ3GEYJ223V | Carbon | 22K ohms 1/16W |
| R6 | ERJ3GEYJ682V | Carbon | 6.8K ohms 1/16W |
| R7 | ERJ3GEYJ331V | Carbon | 330 ohms 1/16W |
| R8 | D0GB101JA001 | Carbon | 100 ohms 1/16W |
| R9 | YWR0816P102D | Metal | 1K ohms 1/16W |
| R10,11 | D0GB102JA001 | Carbon | 1K ohms 1/16W |
| R12 | ERJ3GEYJ391V | Carbon | 390 ohms 1/16W |
| R13 | ERJ3GEYJ362V | Carbon | 3.6K ohms 1/16W |
| R14 | ERJ3GEYJ272V | Carbon | 2.7K ohms 1/16W |
| R15 | ERJ3GEYJ271V | Carbon | 270 ohms 1/16W |
| R16 | ERJ3GEYJ622V | Carbon | 6.2K ohms 1/16W |
| R17 | ERJ3GEYJ221V | Carbon | 220 ohms 1/16W |
| R18 | ERJ3GEYJ332V | Carbon | 3.3K ohms 1/16W |
| R19,20 | YWR0816P561D | Metal | 560 ohms 1/16W |
| R21,22 | YWR0816Q560D | Metal | 56 ohms 1/16W |
| R24,25 | D0GB222JA001 | Carbon | 2.2K ohms 1/16W |
| R26 | ERJ3GEYJ220V | Carbon | 22 ohms 1/16W |
| R27 | ERJ3GEYJ821V | Carbon | 820 ohms 1/16W |
| R28 | ERJ3GEYJ680V | Carbon | 68 ohms 1/16W |
| C1-3 | EEVHB1C220R | Electrolytic | 22 µF 16V |
| C4,5 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C6 | F1H1H101A004 | Ceramic | 100 pF |
| C7 | F1H1H131A004 | Ceramic | 130 pF |
| C8 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C9 | YW5F474Z1VT | Ceramic | 0.47 µF |
| C10 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C11 | F1H1H331A650 | Ceramic | 330 pF |
| C12 | F1H1H5R00001 | Ceramic | 5 pF |
| C13 | EEVHB1C220R | Electrolytic | 22 µF 16V |
| C14,15 | F1H1H220A004 | Ceramic | 22 pF |
| C16 | F1H1H270A004 | Ceramic | 27 pF |
| C17 | F1H1H390A004 | Ceramic | 39 pF |
| C18 | F1H1H101A004 | Ceramic | 100 pF |
| C19 | F1H1H560A004 | Ceramic | 56 pF |
| C20 | MCUV1H470JCV | Ceramic | 47 pF 50V |
| C21 | F1H1H680A004 | Ceramic | 68 pF |
| C23 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C24 | F1H1H103A013 | Ceramic | 0.01 µF |

| REF. NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| C25 | EEVHB1C220R | Electrolytic | 22 µF 16V |
| C26 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C27 | EEVHB1C470P | Electrolytic | 47 µF 16V |
| C28 | MCUV1H820JCV | Ceramic | 82 pF 50V |
| C29 | MCUV1E104ZFV | Ceramic | 0.1 µF |
| C30 | EEVHB1C220R | Electrolytic | 22 µF 16V |
| C31,32 | EEVHA1A471P | Electrolytic | 470 µF 10V |
| L1 | G1C8R2J00002 | Coil | 8.2 µH |
| L2 | G1C220J00001 | Coil | 22 µH |
| L3 | G1C8R2J00002 | Coil | 8.2 µH |
| L101 | G1C100J00001 | Coil | 10 µH |
| CN1 | YW41756390 | 10-pin Connector | |
| CN2 | YW41756392 | 12-pin Connector | |

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